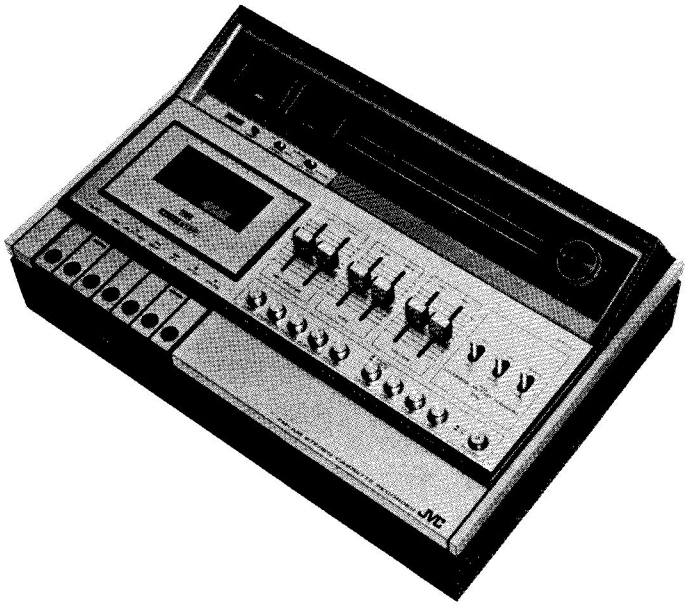
JVC
NIVICO

No. 1246

SERVICE MANUAL



MODEL 9470LS

FM/MW/LW STEREO RECEIVER

CASSETTE DECK

DIMENSIONS : H — 14.8cm, W — 43.6cm, D — 29cm **WEIGHT :** 9kg

SPECIFICATIONS

Semiconductors :	4ICs, 1 FET and 38 Transistors
Frequency Range :	FM 88~ 108MHz
	MW 540~1600kHz
	LW 150~ 350kHz
Intermediate Frequency :	FM 10.7MHz
	MW/LW 455kHz
Antenna System :	FM External 300Ω balanced
	MW/LW Ferrite core or external
Tone Controls :	Bass and Treble
Frequency Response :	25~30000Hz
Output Power :	15W + 15W RMS

Terminals :	MAIN & REMOTE speakers, FM & AM ext. antenna, DIN, Grounding, External tape deck (REC & PLAY), AUX, PHONO
Cassette Deck :	Stereo cassette deck, Automatic shut-off
Track System :	4-track 2-channel stereo
Tape Speed :	4.75cm/s
Bias :	AC erase and record
F.F. Time :	Within 80 sec (C-60)
Rewinding Time :	Within 80 sec (C-60)
Wow & Flutter :	Less than 0.2%
S/N :	More than 50dB
Power Source :	AC 110/220/240V 50/60Hz
Power Consumption :	70W (at 8Ω load)
	100W (at 4Ω load)

VICTOR COMPANY OF JAPAN, LIMITED.

TO REMOVE CHASSIS

REMOVE BOTTOM COVER (Refer to Fig. 1)

1. Remove 7 screws **(1)~(7)** (SPSP3006RS) then, the bottom cover can be removed.
2. The wooden frame can be taken off after removing the bottom cover.

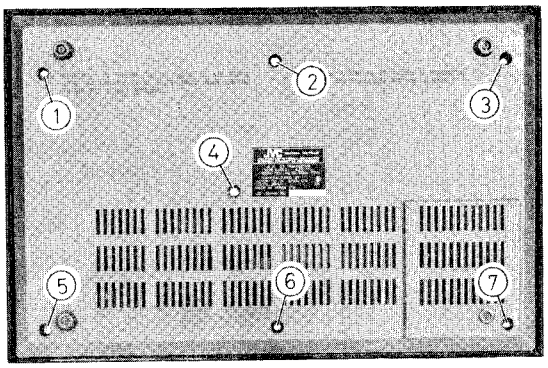


Fig. 1

REMOVE MAIN AMP. CHASSIS(Refer to Fig. 2)

1. Remove 3 screws **(8)~(10)** (SPSP3006ZS).
2. Remove the screw **(A)** (SPSP2606Z).
3. Disconnect the 4-pin plug **(B)** and 2 receptacles **(C)** & **(D)**.
4. Take the circuit board ass'y out of the chassis and disconnect the 3-pin socket two 4-pin socket and two 5-pin sockets, then the main amp. chassis can be removed.

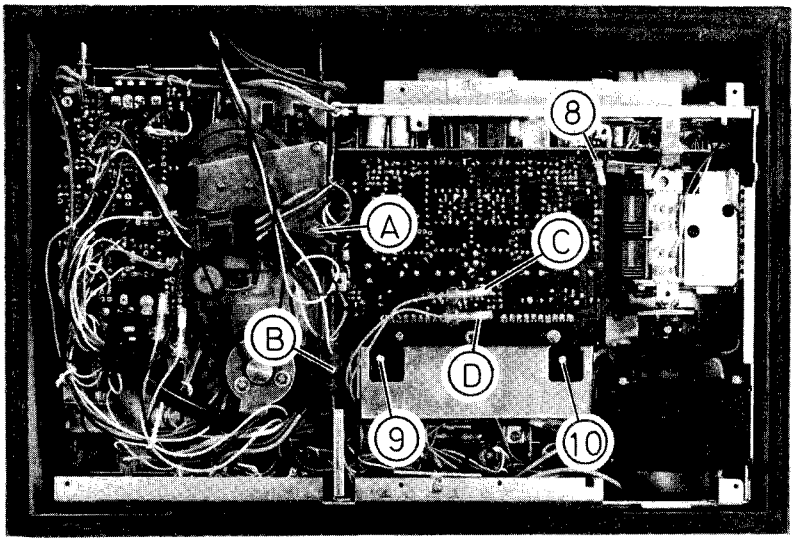


Fig. 2

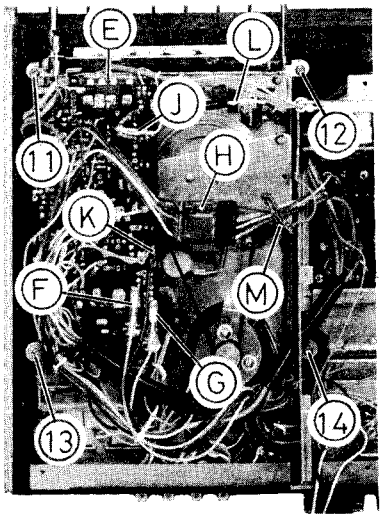


Fig. 3

REMOVE CASSETTE MECHANISM (Refer to Fig. 3)

1. Remove 4 screws **(11)** **(14)** (SBSB3010Z).
2. Disconnect the 4-pin plug **(E)**, two receptacles **(F)** & **(G)** and the 4-pin socket **(H)**.
3. Remove the wire **(J)** and desolder the wires **(K)** & **(L)**.
4. Release the 4-pin plug **(H)** from the cassette mechanism by straightening the wire clamp **(M)**, then the mechanism can be removed.

REMOVE MAIN CHASSIS (Refer to Fig. 4 & 5)

Remove 9 screws **(15)~(23)** (SBSB3010Z), then the main chassis can be removed from the front cabinet.

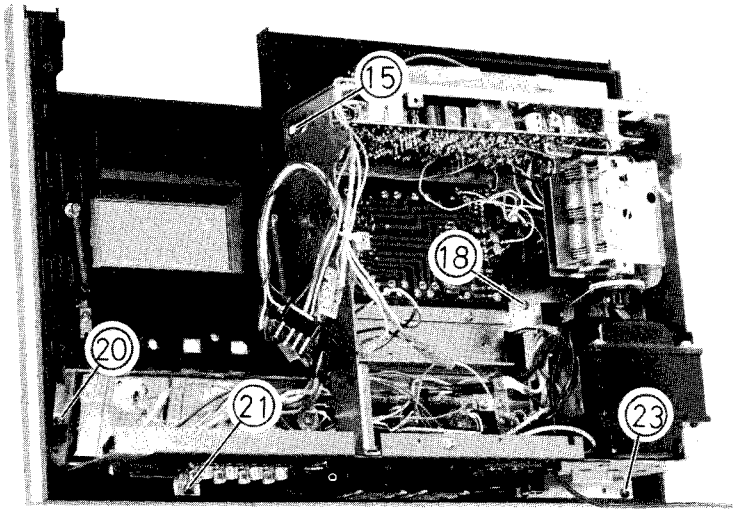


Fig. 4

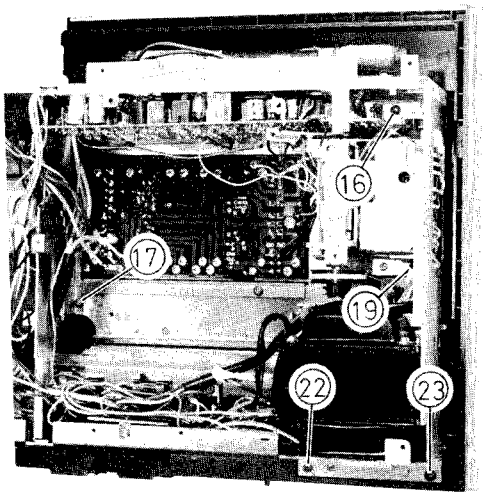


Fig. 5

TO STRING DIAL CORD (Refer to Fig. 6)

1. Set the variable capacitor on maximum.
2. Cord length : 0.7ϕ × 1270mm
3. Attach the spring to the dial drum. String one side of the looped cord in accordance with the numerical order (1 ~ 3) and wind the other side of the cord round the drum with alphaberical order (a ~ f), then lead the cord to the outside of the chassis through the opening of the chassis by fixing it not to loose.
4. String the cord in accordance with the numerical order (4~9), and finally string the cord to the roller (10).
5. For adjusting the cord tension, swing the roller bracket (A) by unscrewing the screws.
6. Attach the needle to the cord.

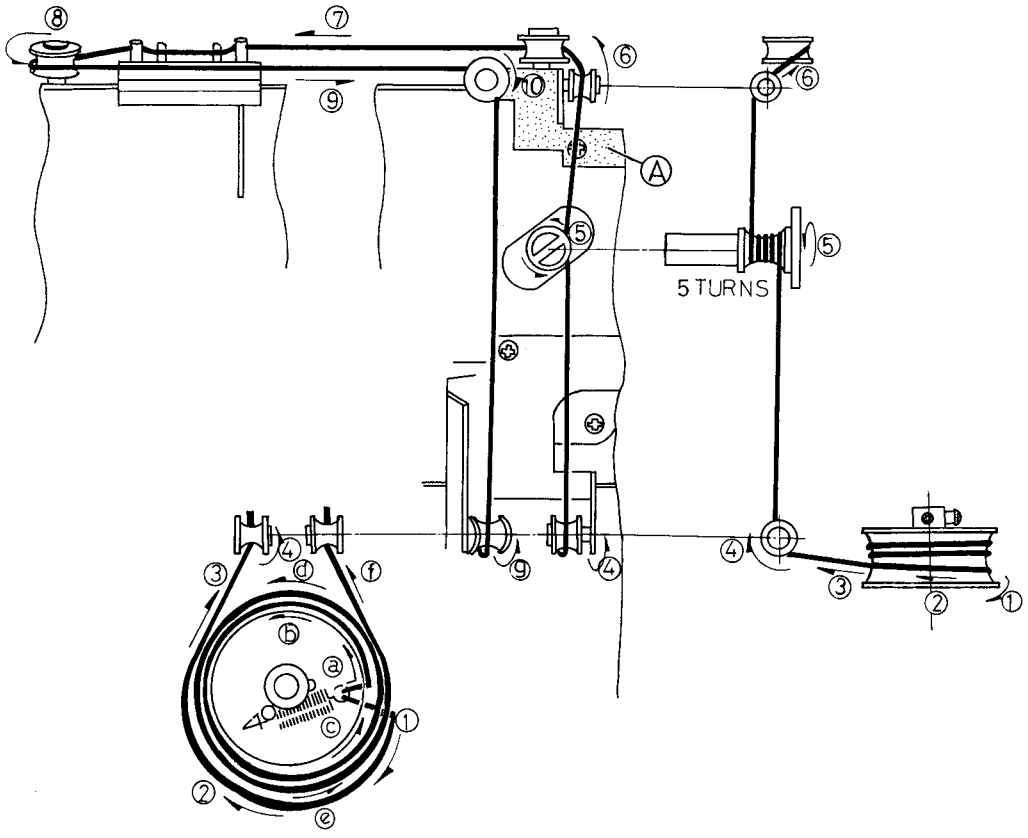


Fig. 6

TO ALIGN THE SET

Power Source : AC 220V (or 110V)
Output Measuring : Speaker terminal

AM IF & RF ALIGNMENT (Refer to Fig. 10)

1. Depress the RADIO button.
2. Set the Volume control to the maximum and the Tone controls to center position.
3. Input (S.S.G.) : Modulation 400Hz 30%.

Step	Band	Input Signal		Place to be aligned	Set V. Capacitor to
		Frequency	Given to		
1	MW	455kHz	Loop Antenna	L10, VR1	Minimum
2	(IF)	Adjust L10 & VR1 for no further improvement.			
3	MW	520kHz	Loop Antenna	L8	Maximum
4		1650kHz		C11	Minimum
5		Repeat the Step 3 & 4.			
6		600kHz	Loop Antenna	L6	600kHz Signal
7		1400kHz		C9	1400kHz Signal
8		Repeat the Step 6 & 7, and adjust for no further improvement.			
9	LW	145kHz	Loop Antenna	L9	Maximum
10		360kHz		C12	Minimum
11		Repeat the Step 9 & 10.			
12		150kHz	Loop Antenna	L7	150kHz Signal
13		350kHz		C10	350kHz Signal
14		Repeat the Step 12 & 13, and adjust for no further improvement.			

FM IF & DISCRIMINATOR ALIGNMENTS

1. Set the MODE selector to MONO.
2. Set the VOLUME to minimum and tune in the maximum frequency where no signal comes in.
3. Connect the clip of the TV. sweep generator's IF/VF OUTPUT lead to the test point TP1 and the other clip to the "E" (Refer to Fig. 10).
4. Connect the scope terminal of the sweep generator to H. INPUT of oscilloscope.
5. Connect the V. INPUT terminal to the test point TP4 (Refer to Fig. 10).
6. IF Alignment
   a. Align the L14 so that the wave mode will be appeared on either side of the flyback line. (Refer to Fig. 7 & 8).
   b. Align the L5, 11, 13 so that the maximum sensitivity and symmetrical wave mode will be obtained setting the marker 10.7MHz on the peak. (Refer to Fig. 8)
7. Discriminator Alignment
   Align the L13, 14 so that the symmetrical "S" curve will be obtained setting the marker 10.7MHz on the center of the "S" curve. (Refer to Fig. 9)

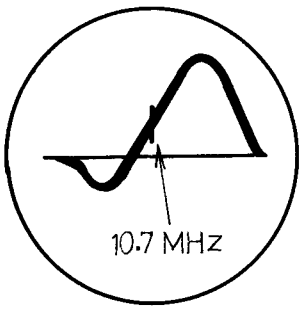


Fig. 7

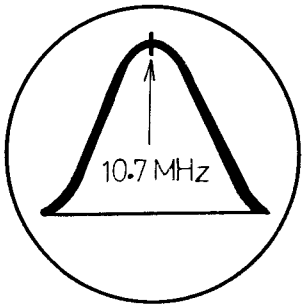


Fig. 8

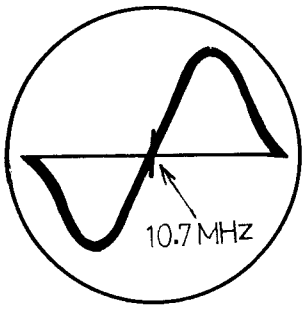


Fig. 9

FM RF ALIGNMENT

Input (S.S.G.) : Use 75Ω terminal modulation 1000Hz modulated to 22.5kHz deviation.

Step	Band	Input Signal		Place to be aligned	Set V. Capacitor to
		Frequency	Given to		
1	FM	87.5MHz	"A" (Refer to Fig.10)	L4	Maximum
2		109MHz		C8	Minimum
3		Repeat the Step 1 & 2.			
4		88MHz	"A" (Refer to Fig.10)	L2	88MHz Signal
5		106MHz		C6,7	106MHz Signal
6		Repeat the Step 4 & 5, and adjust for no further improvement.			

FM MPX ALIGNMENT (Refer to Fig. 10)

Input (S.S.G.) : 98MHz 1000μV
MODE selector : STEREO

1. 19kHz stage alignment
   a. Connect the V.T.V.M. to the test point TP3.
   b. Feed the FM MAIN signal or PILOT signal (19kHz) to the FM antenna terminal.
   c. Adjust L15, 16 for maximum output.
2. 38kHz stage alignment
   a. Connect the V.T.V.M. to TP6 or TP7.
   b. Feed the FM stereo SUB signal.
   c. Adjust L16 for maximum output.
3. Separation alignment
   a. Connect the V.T.V.M. to TP6 (Right channel output).
   b. Feed the LEFT channel signal.
   c. Adjust the VR2 for minimum output.
   d. Connect the V.T.V.M. to TP7 (Left channel output).
   e. Feed the RIGHT channel signal.
   f. Adjust the VR2 for minimum output.

PARTS ARRANGEMENT FOR ALIGNMENT

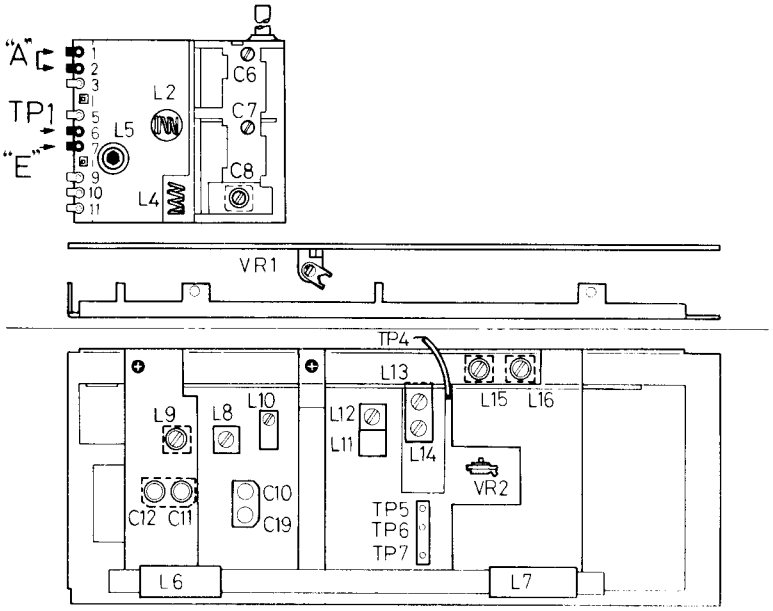


Fig. 10

TO REPLACE HEAD (Refer to Fig. 11)

ERASING HEAD

Remove 2 screws **(A)** & **(B)**, then the head can be replaced.

PLAY/REC HEAD

Remove 2 screws **(C)** & **(D)**, then the head can be replaced.

NOTE : 1. Do not touch the head with a magnetized implement such as screwdriver, or its performance will be adversely affected.

2. Avoid overheating, when soldering signal cord to the head.

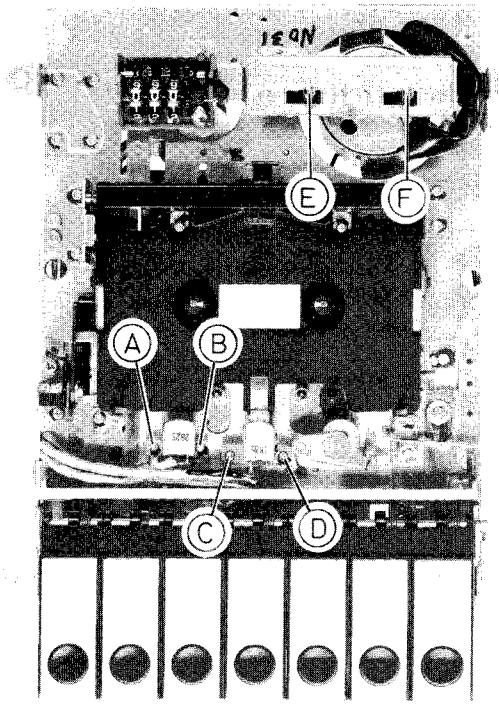


Fig. 11

TO ADJUST HEAD ANGLE (AZIMUTH)

When replace the play/rec head, adjust the head angle.

1. Open the cassette compartment cover.
2. Remove the Head Cover by sliding it into the compartment (Refer to Fig. 12).
3. Connect the V.T.V.M. to the speaker terminals.
4. Playback the standard tape for angle adjustment (azimuth).
5. Adjust the head angle by turning the screw **(C)** minutely for maximum output. (Refer to Fig. 11 & 13).

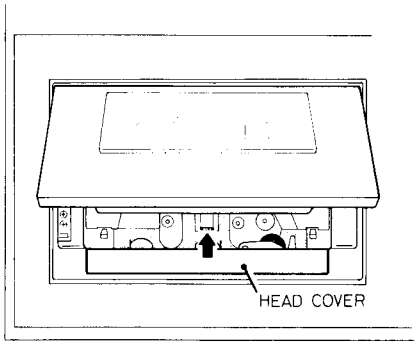


Fig. 12

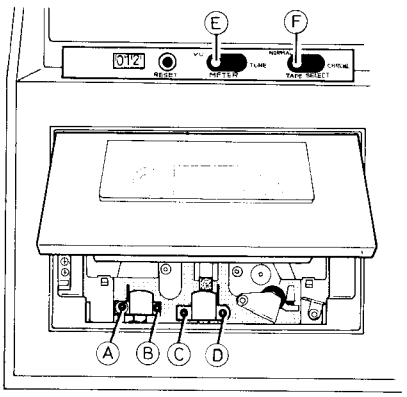


Fig. 13

TO ALIGN BIAS FREQUENCY

1. Desolder the copper shield of the signal cable from the erasing head and solder a 10Ω resistor between the copper shield and the printed circuit board (Refer to Fig. 14).
2. Connect the V.T.V.M. and the Frequency Counter to the both leads of the 10Ω resistor.
3. Set the METER switch (E) to BEAT CUT position and the TAPE SELECTOR switch (F) to NORMAL position (Refer to Fig. 11 & 13).
4. Align the L301 so that the bias frequency will become 58kHz. (Refer to Fig. 15).
5. Remove the 10Ω resistor, and solder the copper shield of the signal cable to it's orignal position.

TO ALIGN BIAS VOLTAGE

1. Open the circuit by desoldering 2 jumping wires on the conductor side of the printed circuit board (Refer to Fig. 14).
2. Connect the V.T.V.M. to the test point TP101 and adjust VR106 so that the bias voltage will become 520mV (Refer to Fig. 15).
3. Connect the V.T.V.M. to the test point TP201 and adjust VR206 so that the bias voltage will become 600mV (Refer to Fig. 15).
4. Short the circuit by soldering 2 jumping wires on the conductor side of the printed circuit board (Refer to Fig. 14).

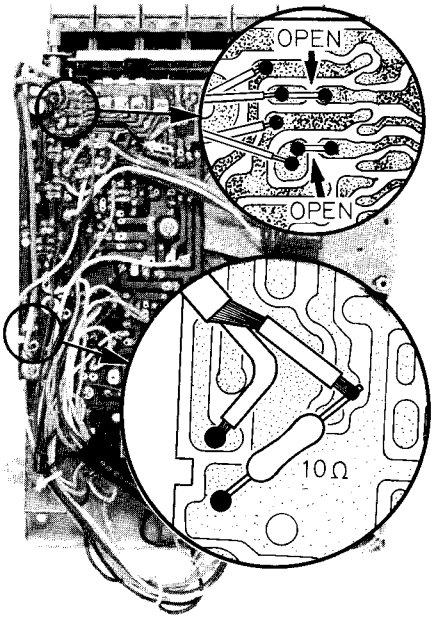


Fig. 14

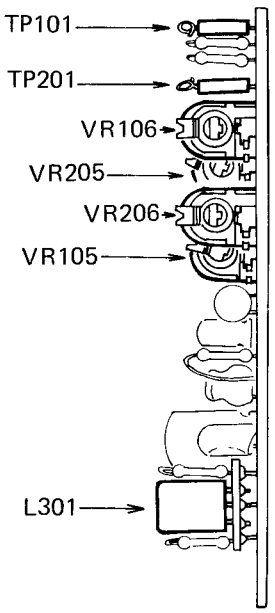


Fig. 15

TO ALIGN LEVEL OF VU METER

1. Lefet-channel VU meter
   a. Feed 1kHz 60mV signal to the left-channel AUX terminal.
   b. Adjust VR105 so that the VU meter indicates 0VU. (Refer to Fig. 15).
2. Right-channel VU meter
   a. Feed 1kHz 60mV signal to the right-channel AUX terminal.
   b. Adjust VR205 so that the VU meter indicates 0VU. (Refer to Fig. 15).

TO CONVERT POWER SUPPLY VOLTAGE

When changing the power supply voltage, change the connection of the power transformer as illustrated in Fig. 16.

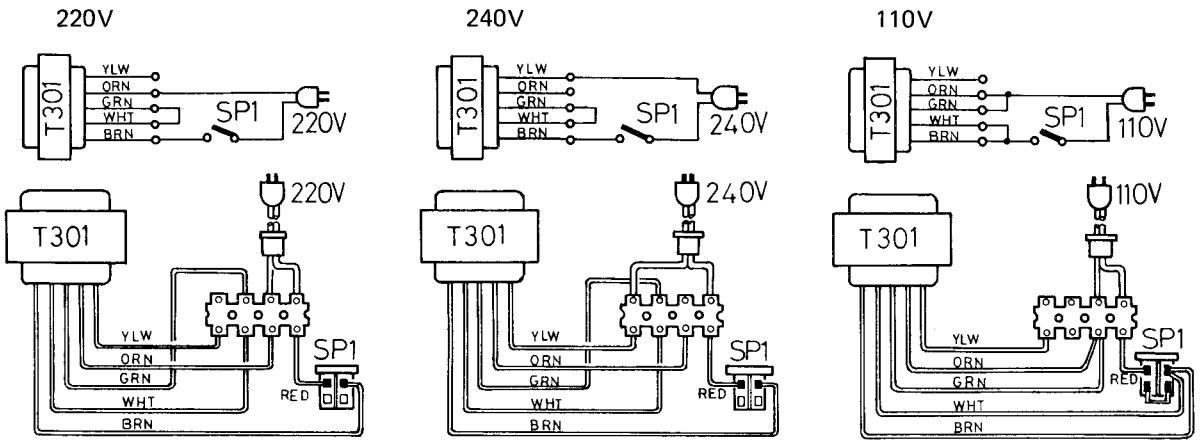


Fig. 16

OUTLINE DRAWING OF TRANSISTOR & DIODES

Symbol	Name	Fig.
X1	3SK30	A
X2	2SC535	B
X3	2SC1342	B
X4	2SC930(D)	C
X5,6	2SC929(D)	C
X7,8,110,210,213	2SC537(D)	C or D
X9	2SA659(E)	D
X101~103,201~203	2SC693(FU)	C or D
X104~109,111,112,204~109,211,212,302,303	2SC536F	C or D
X301,306	2SC1173(E)	D
X304	2SC933(F)	D
X305	3SD331(D)	E
D1	ITT410	F
D2~8,107,108,207,208	1S188FM	G
D101~106,201~206	DS442	H
D301~304	V06(C),(E)	J
D305~308	10D1	K
D309	HR5A	L
D310	SZ13	M

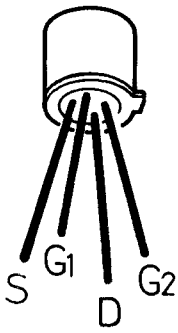


Fig. A

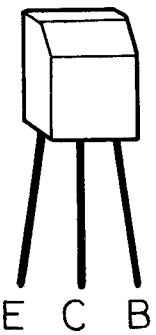


Fig. B

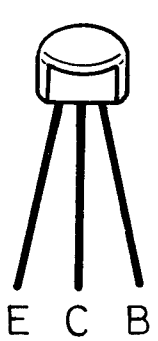


Fig. C

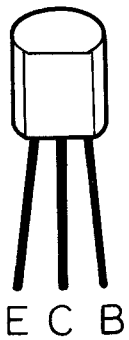


Fig. D

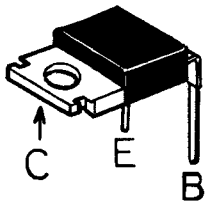


Fig. E

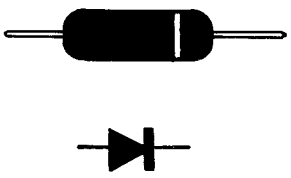


Fig. F

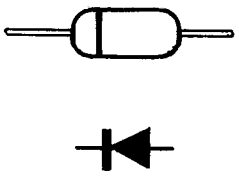


Fig. G

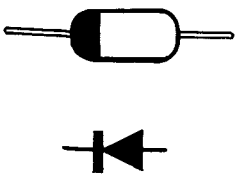


Fig. H

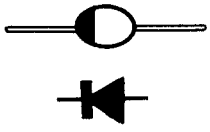


Fig. J

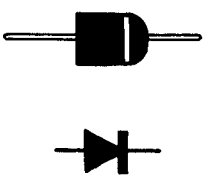


Fig. K

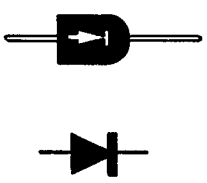


Fig. L

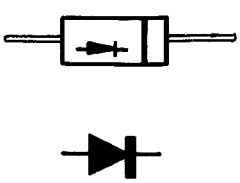


Fig. M

EQUIVALENT SCHEMATIC DIAGRAM OF IC

IC1 LA1201

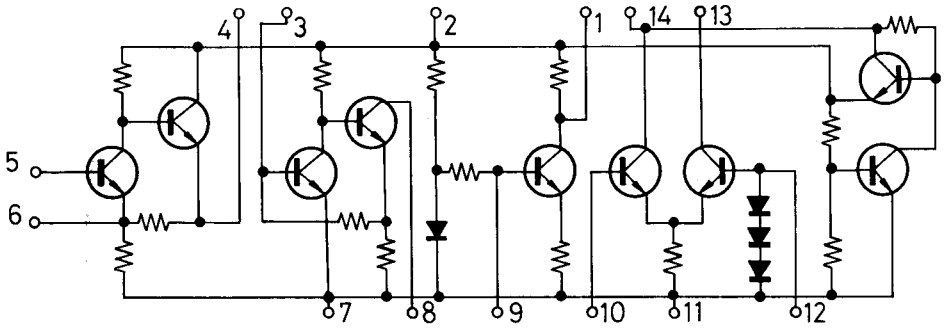


Fig. 17

IC2 LA3301

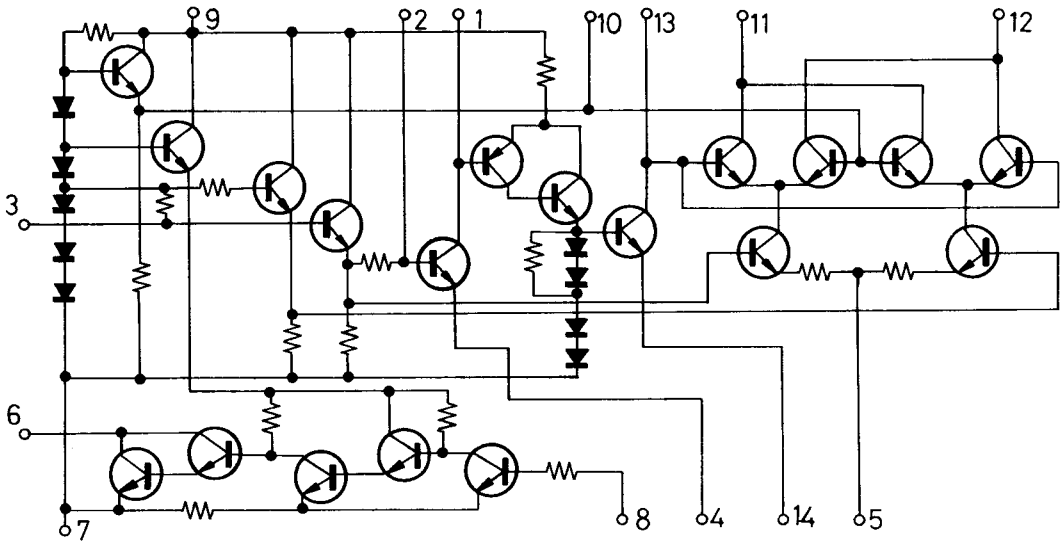


Fig. 18

IC101,201 VC5004

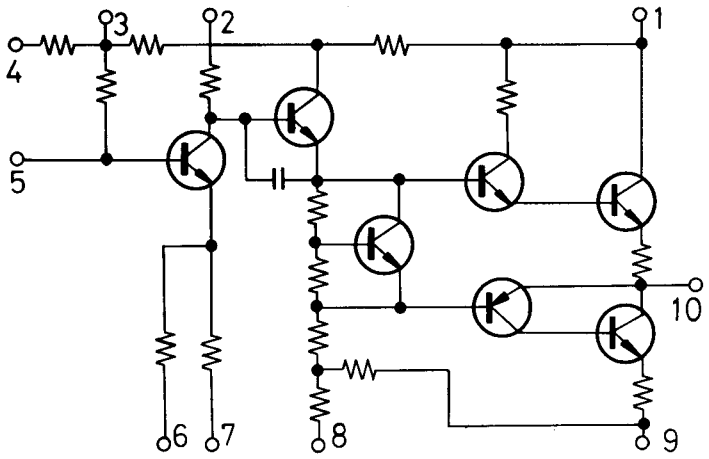


Fig. 19

Terminal Location

IC1 LA1201

IC2 LA3301

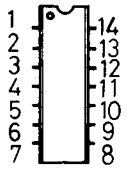


Fig. 20 -A

IC101,201

VC5004

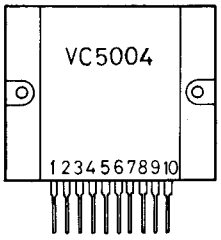


Fig. 20-B

PARTS ARRANGEMENT ON PRINTED CIRCUIT BOARD

FM RF SECTION

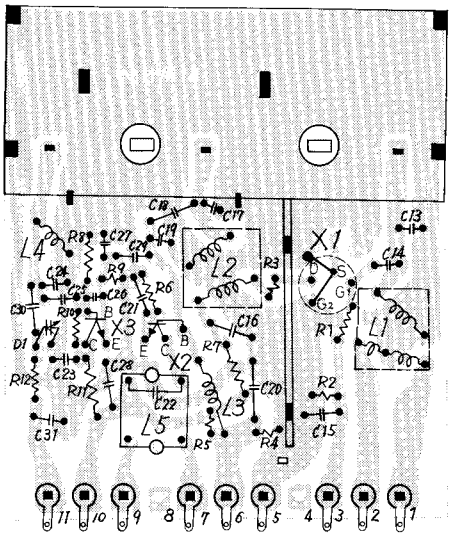


Fig. 21

IF & MPX SECTION

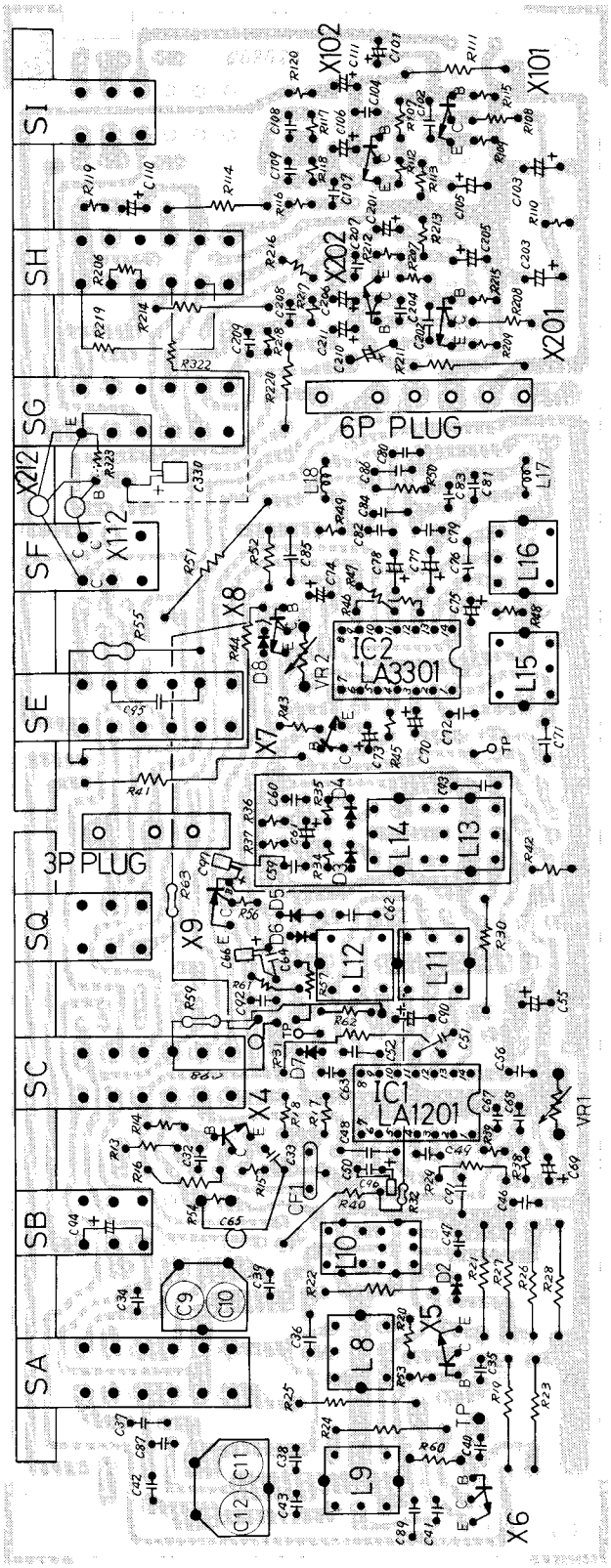


Fig. 22

PARTS ARRANGEMENT ON PRINTED CIRCUIT BOARD

PRE & MAIN AMP. SECTION

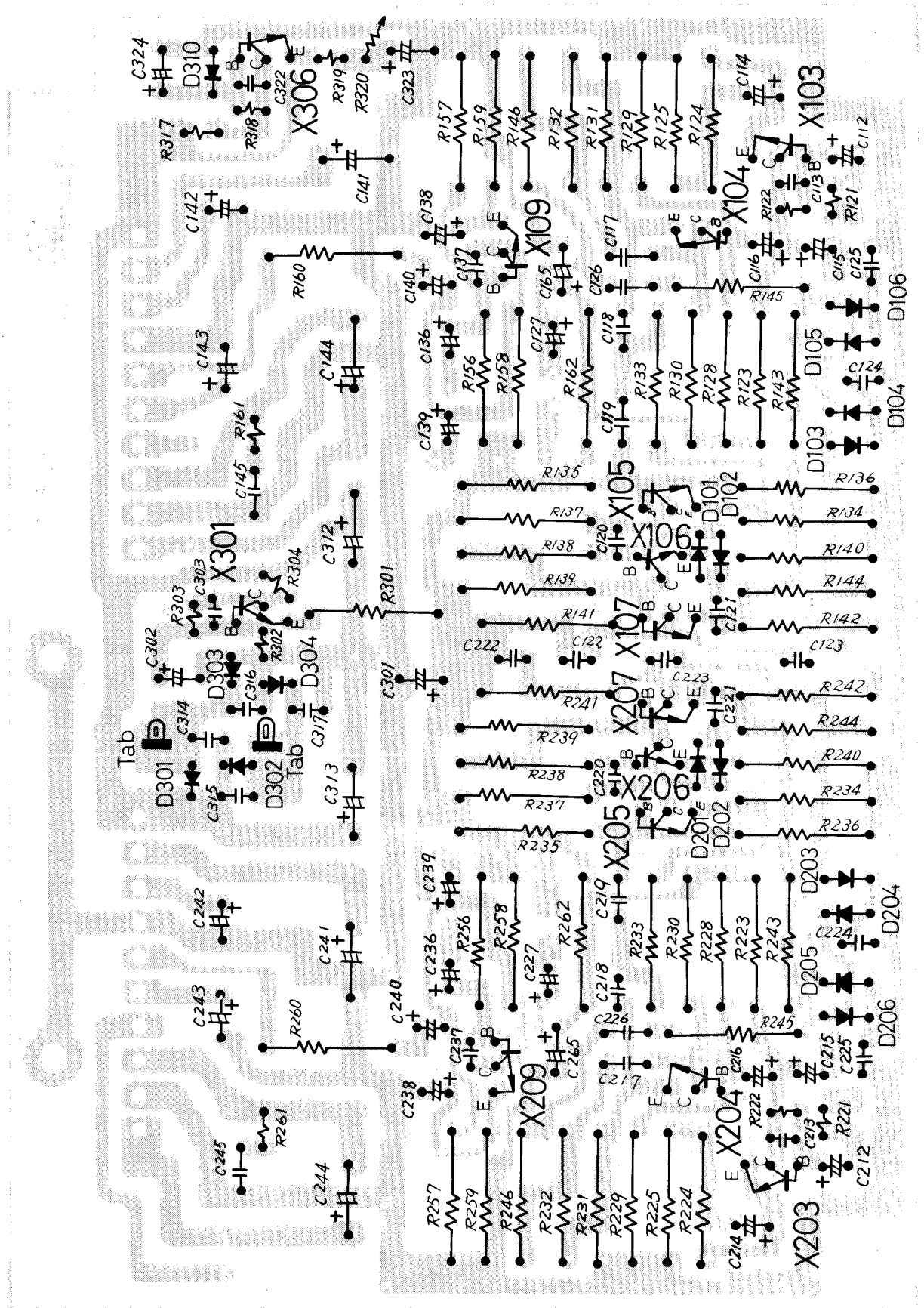


Fig. 23

PARTS ARRANGEMENT ON PRINTED CIRCUIT BOARD

VOLUME & TONE CONTROL SECTION

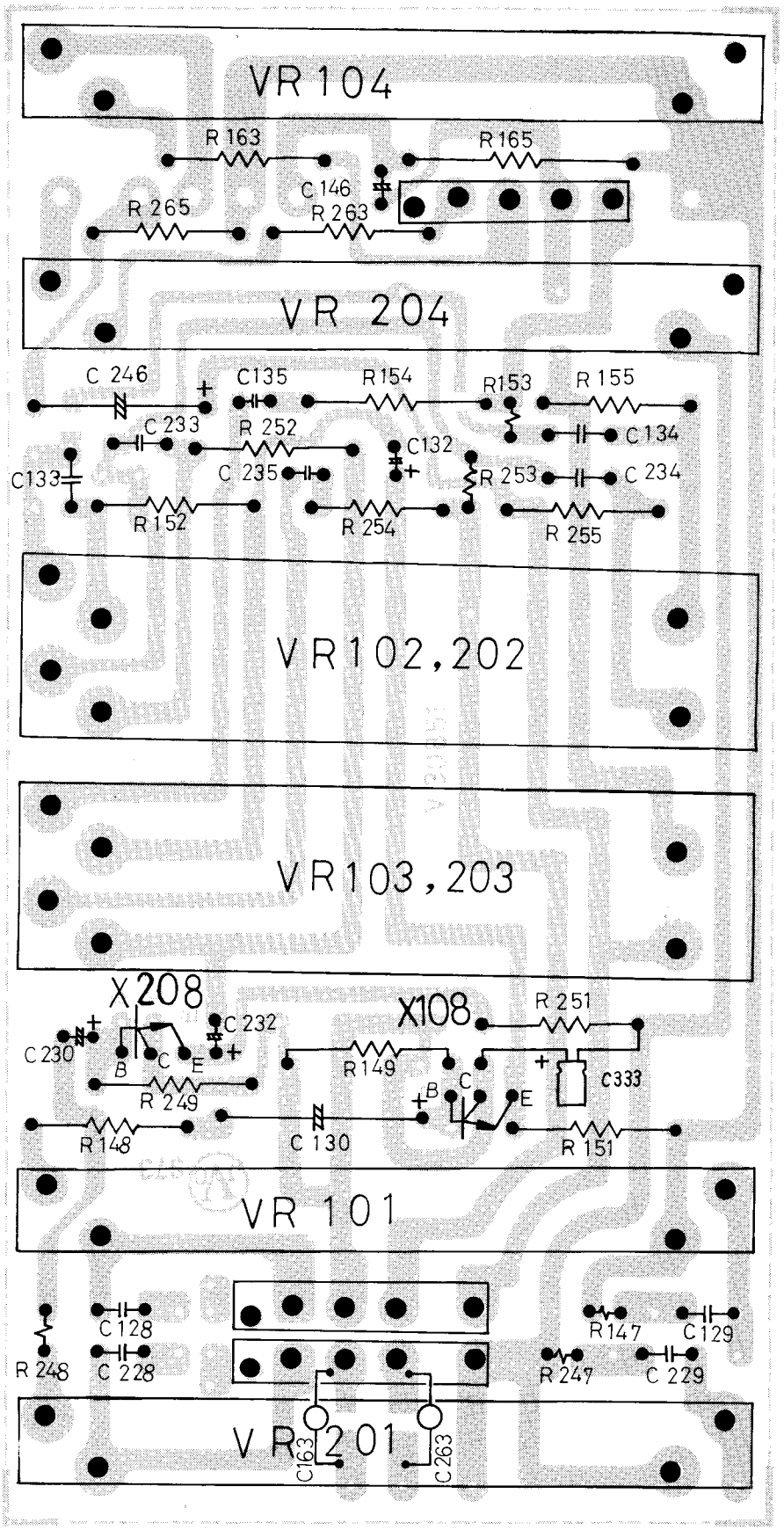


Fig. 24

PARTS ARRANGEMENT ON PRINTED CIRCUIT BOARD

BIAS OSC.

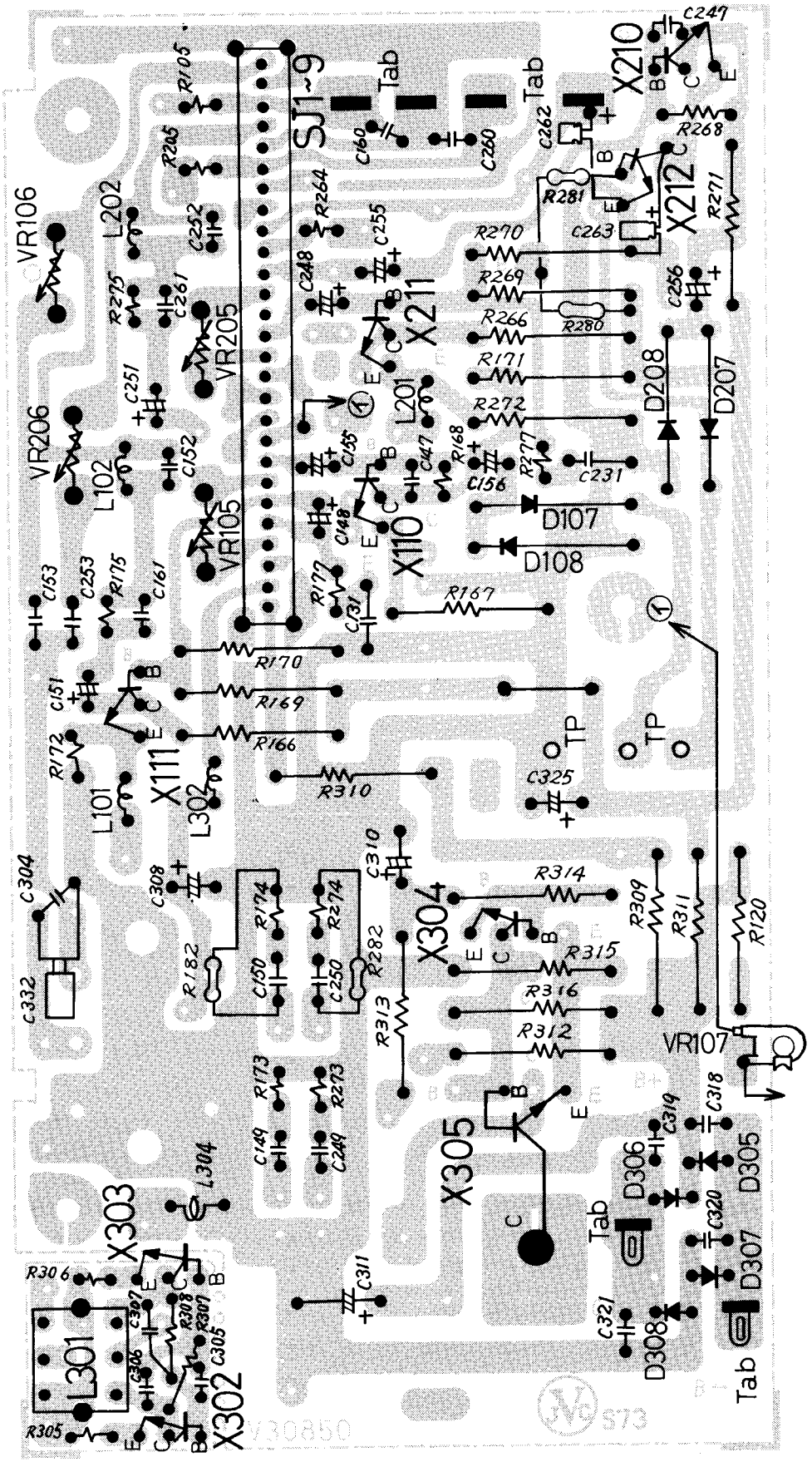


Fig. 25

DISASSEMBLY DIAGRAM OF CABINET

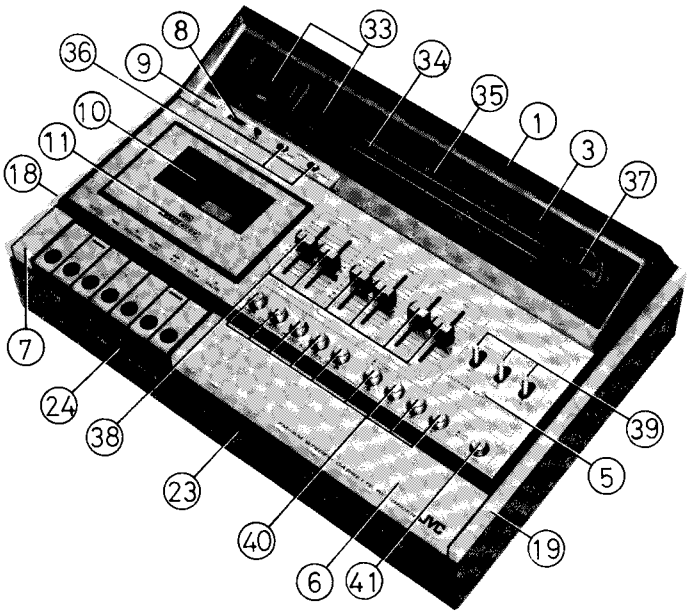


Fig. 26

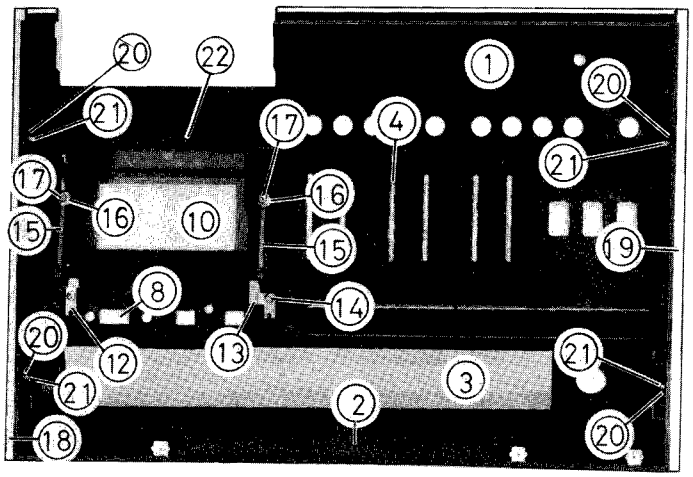


Fig. 27

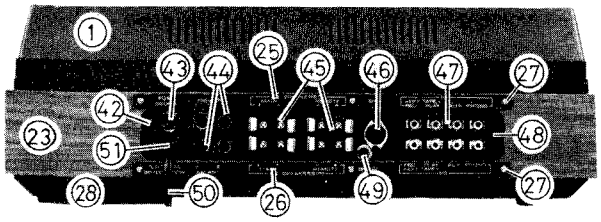


Fig. 28

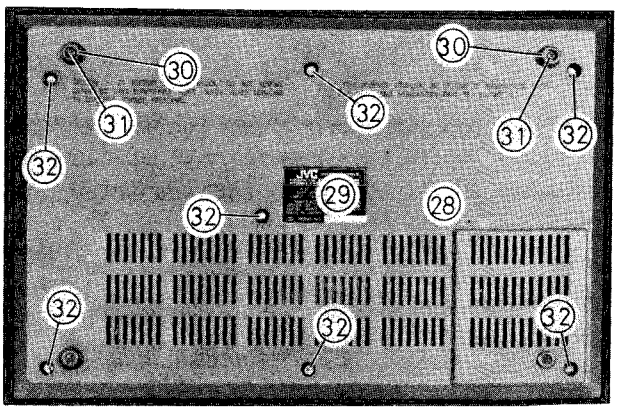


Fig. 29

PARTS LIST OF CABINET (Refer to Fig. 26~29)

Dwg. No.	Parts No.	Parts Name	Remarks
1	V10196-A	Front Cabinet Sub Ass'y	
2	47115-27	Saran Net	Glued
3	V30847-1	Lens	〃
4	V43739-1	Dust Pad	〃
5	V20587-1	Front Panel	〃
6	V30839-3	Plate	〃
7	V43616-1	〃	〃
8	V43014-1	Counter Lens	〃
9	V43615-3	Plate	〃
1~9	———	Front Cabinet Ass'y	
10	V20580-1	Cassette Door	
11	V43738-1	Plate	Glued
12	V43199-1	Door Holder	
13	V43200-1	〃	
14	SBSB3006Z	Screw	
15	V43617-1	Spring	
16	EYB3006	Eylet	
17	SBSB3012Z	Screw	
18	V30843-1	Fitting	Left
19	V30843-2	〃	Right
20	WNS3000Z	Washer	
21	SPSP3006Z	Screw	
22	V43537-1	Head Cover	
23	VW1077-1	Wood Square	
24	V30831-1	Jack Cover	
25	V30857-3	Terminal Plate	
26	V30857-4	〃	
27	MRBP2710N	Screw	
23,25~27	VW1077-00A	Wood Square Ass'y	
28	V10197-1	Back Cover	
29	V42041-16	Name Plate	Glued
30	QZF1508-001	Foot	
31	SDBP3010BS	Screw	
28~31	———	Back Cover Ass'y	
32	SPSP3006RS	Screw	
33	V03089-3	Level Meter	
34	V20588-1	Dial Scale	
35	V43751-A	Needle Ass'y	
36	QSS0034-001	Slide Switch	SN,SR
37	V43643-A	Knob Ass'y	
38	V43554-A	Knob Ass'y	
39	QSL2235-003	Lever Switch	SL,SM,SK
40	V43754-A	Knob Ass'y	
41	VSU1130-00A	Push Switch Ass'y	SP1
42	V30848-1	Terminal Cover	
43	QMG0301-002	Fuse Holder	
44	Q30150-002	Terminal Board Ass'y	
45	E03410-001	4P Push Terminal Ass'y	
46	Q03967-1	DIN Socket Ass'y	J301
47	E0778-80	8P Jack Ass'y	J102~105, 202~205
48	SDBP3006BS	Screw	
49	V43969-1	Special Screw	
50	QMP3800-244	Power Cord with Plug	SEV type approved
50	QMP9014-001	〃	SEMCO type approved
50	QMP7800-244	〃	Continental type plug
51	V40976-3	Power Cord Bushing	

MAIN PARTS LOCATION

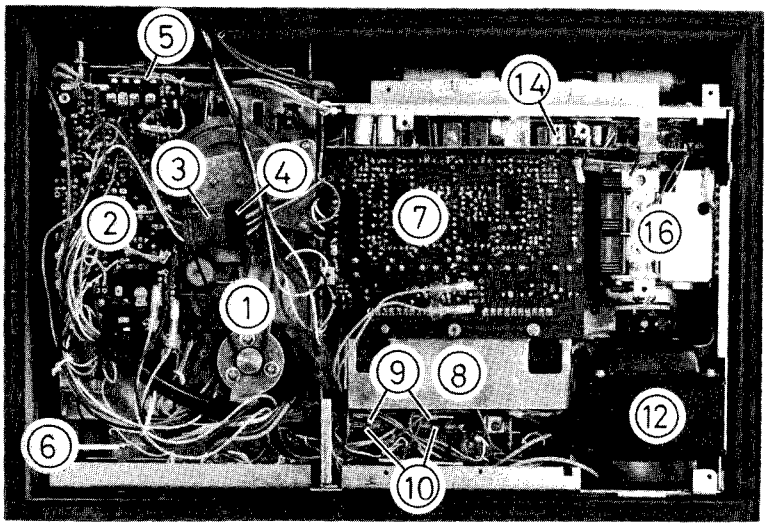


Fig. 30

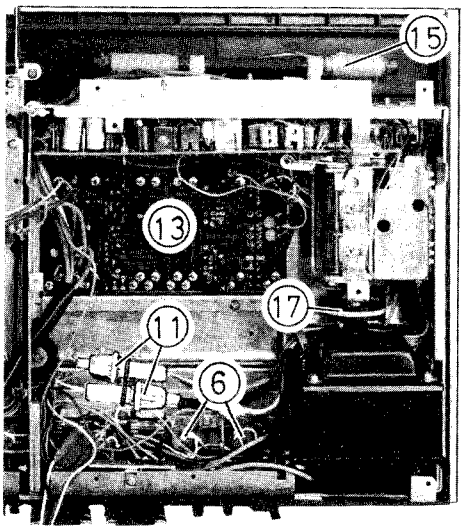
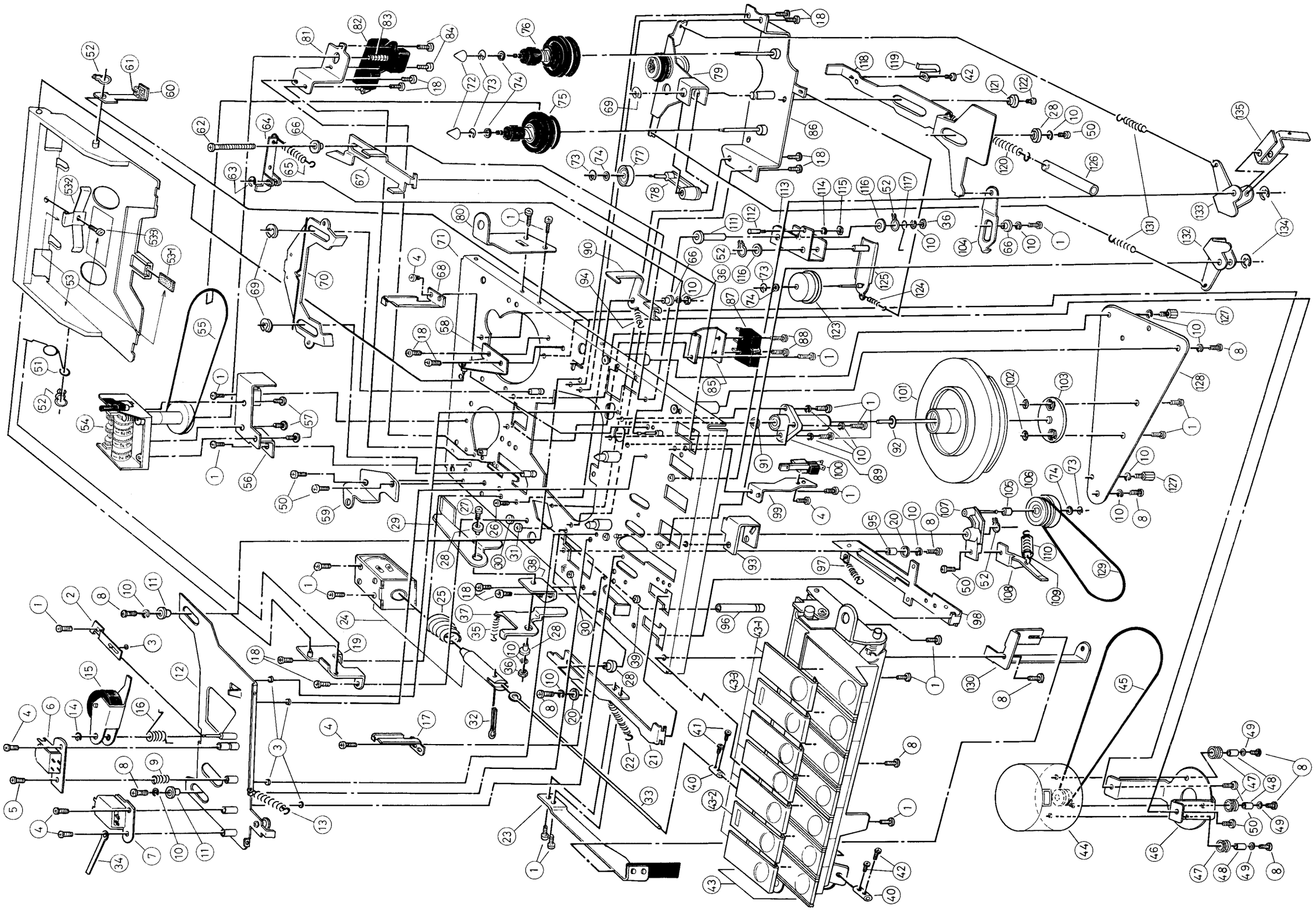


Fig. 31

Dwg. No.	Parts No.	Parts Name	Remarks
1	VDL5010-001B	Cassette Mecha. Ass'y	
2	———	Bias Osc Circuit Board Ass'y	
3	V04060-00B	Socket Ass'y	
4	V04059-001	Plug Ass'y	
5	A44623-00A	〃	
6	Q30110-A	Pilot Lamp Socket	
7	———	Pre & Main Amp Circuit Board Ass'y	
8	V20585-1	Radiation Plate	
9	Q30213-001	Fuse Holder	
10	QMF51A2-2R0	Fuse	2AT
11	QMG8301-002	Fuse Holder	1.6AT
12	VTP76N5-A0A	Power Transformer	
13	———	Volume & Tone Control Circuit Board Ass'y	
14	———	IF & MPX Circuit Board Ass'y	
15	VQB018B-011	Bar Antenna Ass'y	with Holders
16	VAF2A23-32A	Tuner Ass'y	
17	QZD1205-001	Dial Drum	

SASSEMBLY DIAGRAM OF CASSETTE MECHANISM



DISASSEMBLY DIAGRAM OF CASSETTE MECHANISM

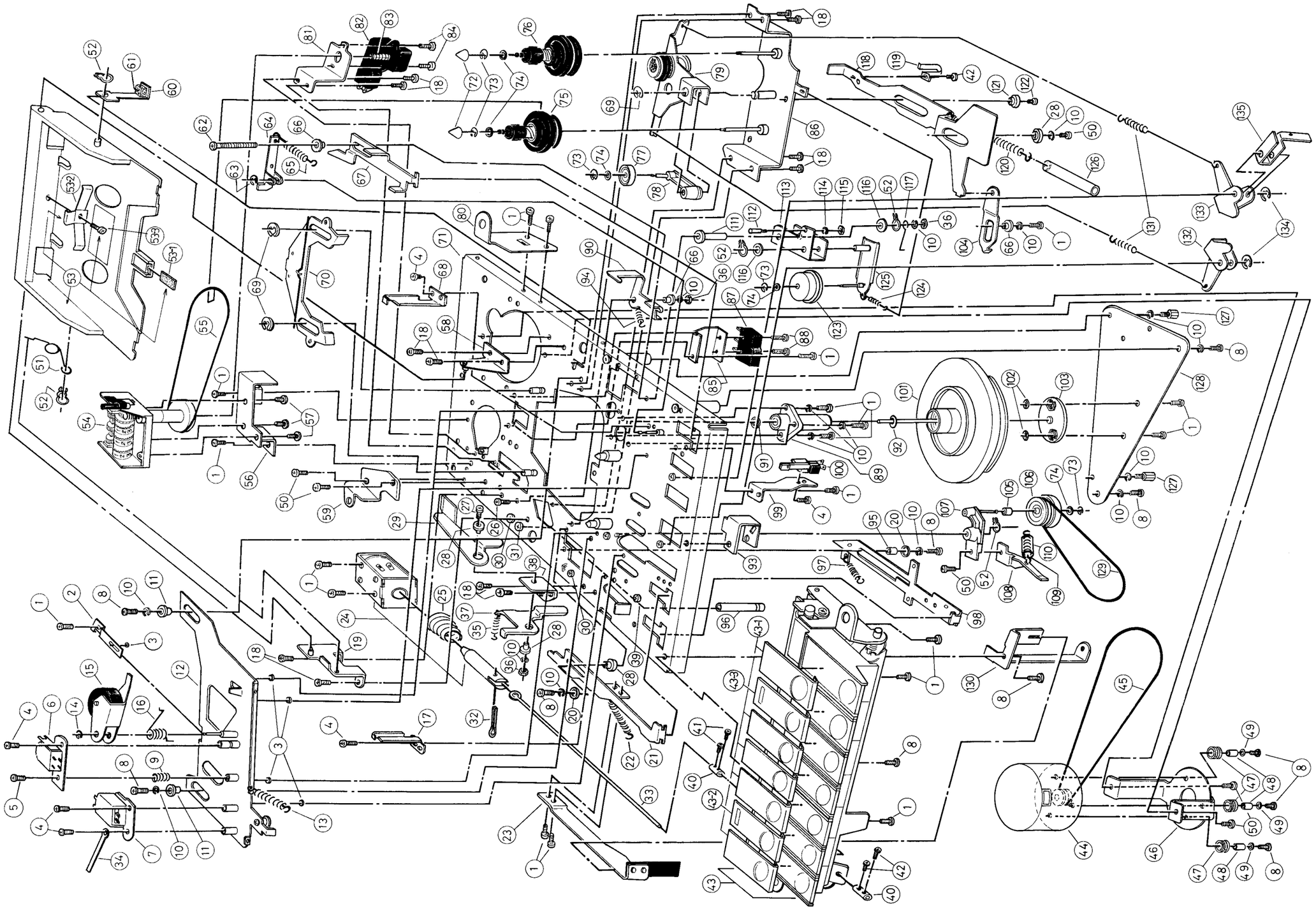


Fig. 32

PARTS LIST OF CASSETTE MECHANISM (Refer to Fig. 32)

Dwg. No.	Parts No.	Parts Name	Remarks
1	SPSP2604Z	Screw	
2	V43573-1	Push Spring	
3	V43574-1	Steel Ball	
4	SPSP2004Z	Screw	
5	SPSP2008Z	Screw	
6	V03078-16	R.P. Head	
7	V03078-17	E. Head	
8	SPSP2606Z	Screw	
9	V43577-1	Spring	
10	WLS2600	Lock Washer	
11	V43575-1	Head Panel Guide	
12	V43567-A	Head Panel Ass'y	
13	V43576-1	Spring	
14	REE1900	"E" Washer	
15	V43581-A	Pinch Roller Ass'y	
16	V43582-1	Spring	
17	V43600-1	Cassette Guide	
18	SPSP2603	Screw	
19	V43613-A	Holder Bracket (L) Ass'y	
20	Q03091-150	Washer	
21	V43597-1	Rec. Slide (A)	
22	V43709-1	Spring	
23	V43708-A	Rec. Slide Ass'y	
24	V43728-1	Solenoid	
25	V43731-1	Spring	
26	SPSP2608Z	Screw	
27	SPSP2610Z	Screw	
28	V43598-1	Slide Guide	
29	V43619-1	Eject Lever	
30	SPSB3010Z	Screw	
31	SPSP3008Z	Screw	
32	V43730-1	Split Pin	
33	V43729-1	Spoke	
34	V43690-1	Wire Clamp	
35	V43655-1	Spring	
36	NNS2600	Nut	
37	V43620-1	Lock Lever	
38	V43621-1	Lever Bracket	
39	SPSB3016Z	Screw	
40	V43675-1	Stop Pipe	
41	SPSP2002	Screw	
42	SPSP2003	Screw	
43	V30838-A	Lever Switch Ass'y	
43-1	V43553-1	Plate	
43-2	V43553-2	Plate	
43-3	V43553-3	Plate	
44	MHI-5R2CV	Motor	
45	V43723-1	Main Belt	
46	V43725-1	Motor Bracket	
47	V43726-1	Motor Rubber	
48	V43727-1	Collar	
49	WSS2600Z	Washer	
50	SPSP2605Z	Screw	
51	V43614-1	Spring	
52	RCS4000	"C" Washer	

Dwg. No.	Parts No.	Parts Name	Remarks
53	V30833-A	Cassette Holder Ass'y	
53-1	03084-476	Felt	
53-2	V43535-1	Holder Spring	
53-3	SPSB2004Z	Screw	
54	V30846-1	Tape Counter	
55	V43605-1	Counter Belt	
56	V43604-1	Counter Bracket	
57	SPSP3005Z	Screw	
58	V43610-A	Holder Bracket (R) Ass'y	
59	V43607-1	Bracket (L)	
60	V43737-1	Stopper	
61	V43622-1	Cushion	
62	SPSP2625Z	Screw	
63	REE2500	"E" Washer	
64	V43595-1	OFF Lever	
65	V43596-1	Spring	
66	V43594-1	Slide Guide	
67	V43593-1	OFF Slide	
68	V43599-1	Cassette Guide (R)	
69	REE3000	"E" Washer	
70	V43603-A	Bracket Arm Ass'y	
71	V30834-A	Chassis Ass'y	
72	V43636-1	Reel Cap	
73	REE1500	"E" Washer	
74	V43637-1	Washer	
75	V43628-A	Reel (L) Ass'y	
76	V43642-A	Reel (R) Ass'y	
77	V43666-1	Rew. Idler	
78	V43663-A	Rew. Idler Arm Ass'y	
79	V43662-A	Idler Arm Ass'y	
80	V43606-1	Bracket (R)	
81	V43736-1	Switch Bracket	
82	V43735-A	Detect Switch Ass'y	
83	V43732-1	Joint Spring	
84	SPSP2005Z	Screw	
85	V43562-1	Switch Bracket	
86	V43627-1	Reel Bracket Ass'y	
87	V43563-1	Main Switch	
88	SPSP2010Z	Screw	
89	V43718-A	Capstan Metal Ass'y	
90	V43703-1	Rec. Safety Lever	
91	V43720-1	Washer	
92	V43719-1	Washer	
93	V43679-1	Stopper	
94	V43776-1	Spring	
95	V43700-1	Collar	
96	V43566-1	Shaft	
97	V43702-1	Spring	
98	V43699-1	Eject Slide	
99	V43564-1	Switch Bracket	
100	V43565-1	Rest Switch	
101	V43714-A	Flywheel Ass'y	
102	NTB2600N	Nut	
103	V43722-1	Capstan Bearing	
104	V43701-1	Stop Arm	

Dwg. No.	Parts No.	Parts Name	Remarks
105	V43671-1	Collar	
106	V43672-1	M. Idler	
107	V43699-A	M. Idler Arm Ass'y	
108	V43670-1	M. Lever	
109	V43673-1	Spring	
110	———	Spaghetti	
111	V43682-1	Shaft	
112	V43681-1	Shaft	
113	V43680-1	Takeup Lever	
114	WLS2000	Lock Washer	
115	NNB2000	Nut	
116	V43686-1	Washer	
117	V43692-1	Spring Guide	
118	V30864-1	Main Slide	
119	V43694-1	Switch Spring	
120	V43697-1	Spring	
121	V43695-1	Slide Guide (A)	
122	SSBP2605N	Screw	
123	V43687-1	Takeup Idler	
124	V43691-1	Spring	
125	V43688-A	Takeup Arm Ass'y	
126	———	Spaghetti	
127	V43724-1	Stud	
128	V43721-1	Flywheel Bracket	
129	V43674-1	M. Belt	
130	V43705-1	Bracket	
131	V43678-1	Spring	
132	V43677-1	Rew. Action Lever	
133	V43676-1	FF. Action Lever	
134	REE5000	"E" Washer	
135	V43945-1	Kick Lever	

DISASSEMBLY DIAGRAM OF MECHANICAL ASSEMBLY

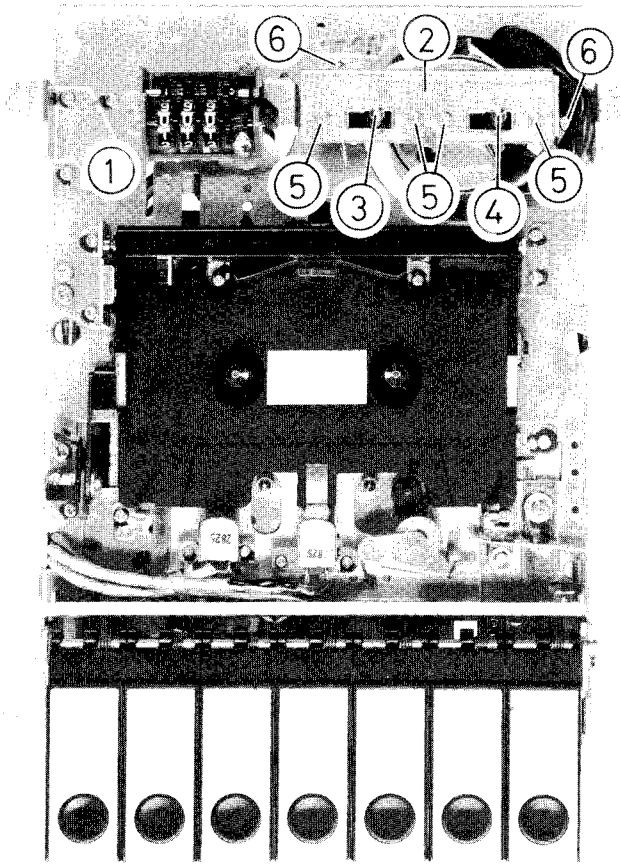


Fig. 33

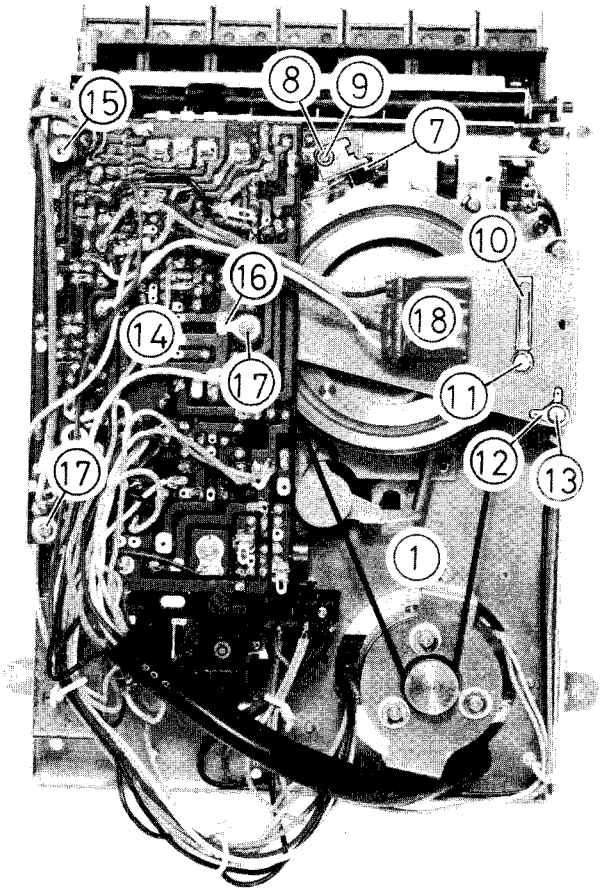


Fig. 34

PARTS LIST OF MECHANICAL ASSEMBLY (Refer to Fig. 33 & 34)

Dwg. No.	Parts No.	Parts Name	Remarks
1	VDL5010-001B	Cassette Mecha. Ass'y	
2	V43552-1	Switch Bracket	
3	QSS0034-001	Slide Switch	
4	QSS0034-001	〃	
5	SPSP2604Z	Screw	
6	SPSP2604Z	〃	
7	V43939-1	Leaf Switch	
8	WLS2600	Lock Washer	
9	SPSP2606Z	Screw	
10	55234-1	Terminal Lug	
11	SPSP2604Z	Screw	
12	50242-2	Terminal Lug	
13	SPSP2604Z	Screw	
14	———	Bias Osc. Circuit Board Ass'y	
15	V41952-4	Stud	
16	53840-2	Lug	
17	SPSP2606Z	Screw	
18	V04060-00B	Socket Ass'y	

DISASSEMBLY DIAGRAM OF CHASSIS ASSEMBLY

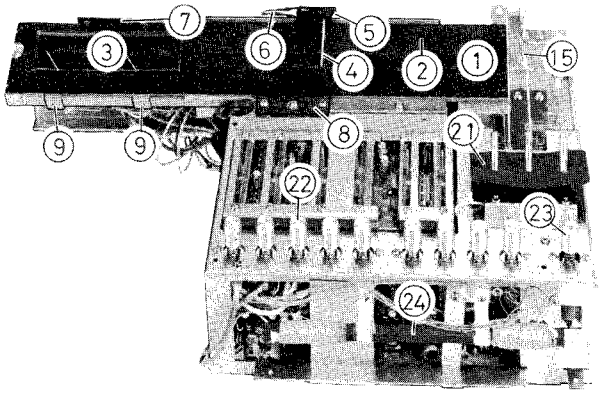


Fig. 35

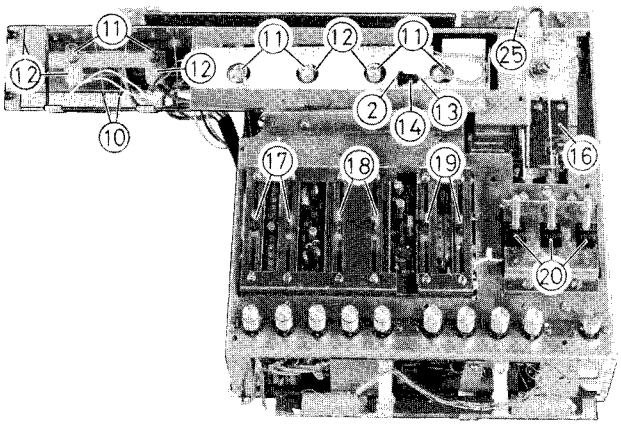


Fig. 36

PARTS LIST OF CHASSIS ASSEMBLY (Refer to Fig. 35 & 36)

Dwg. No.	Parts No.	Parts Name	Remarks
1	V20588-1	Dial Scale	
2	E46487-003	Rabbit Eye	Glued
3	V03089-3	Level Meter	
4	V43751-A	Needle Ass'y	
5	V43788-1	Spacer	
6	QLP3104-201	Pilot Lamp	PL2
7	V43795-1	Holder (B)	
8	V43794-1	Holder (A)	
9	V43896-1	Dial Holder	
10	V43766-1	Spring	
11	Q04968-001	Pilot Lamp	PL3~8
12	Q30110-A	Pilot Lamp Socket	
13	QLP3104-202	Pilot Lamp	PL1 Stereo Indicator
14	V43747-1	Holder	
15	V43799-00A	Tuning Shaft Ass'y	with Bushing
16	V43771-A	Roller Bracket Ass'y	
17	QVT4AJB-015	Variable Resistor	VR104,204
18	QVT5AJB-115	"	VR102,103,202,203
19	QVT4AJB-515	"	VR101,201
20	QSL2235-003	Lever Switch	SL, SM, SK
21	V43743-1	Dust Pad	
22	V43754-A	Knob Ass'y	
23	VSU1130-00A	Push Switch Ass'y	with Knob
24	VQB018B-011	Bar Antenna Ass'y	L6, 7
25	V43749-A	Roller Bracket Ass'y	

BLOCK DIAGRAM

TUNER SECTION

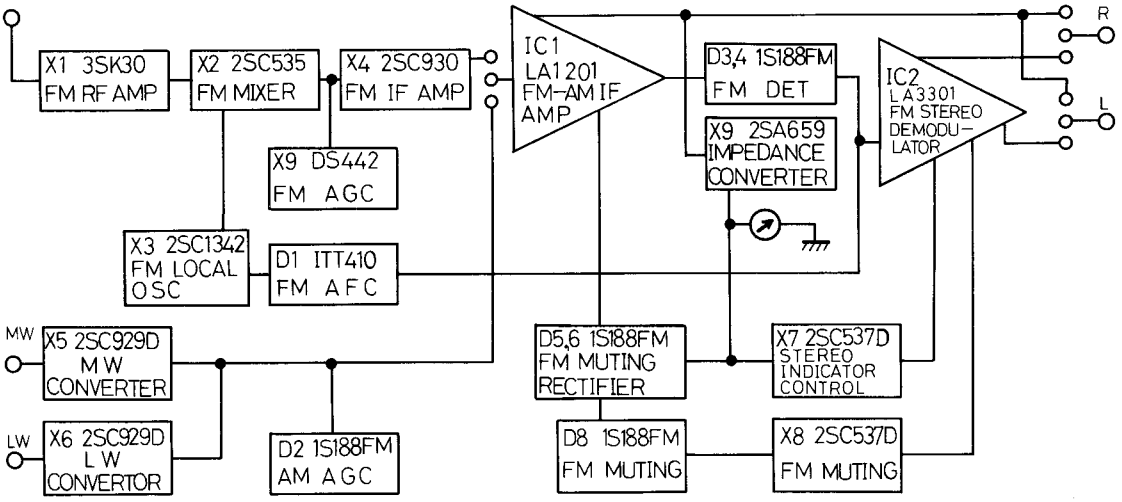


Fig. 37

PLAYBACK & RADIO

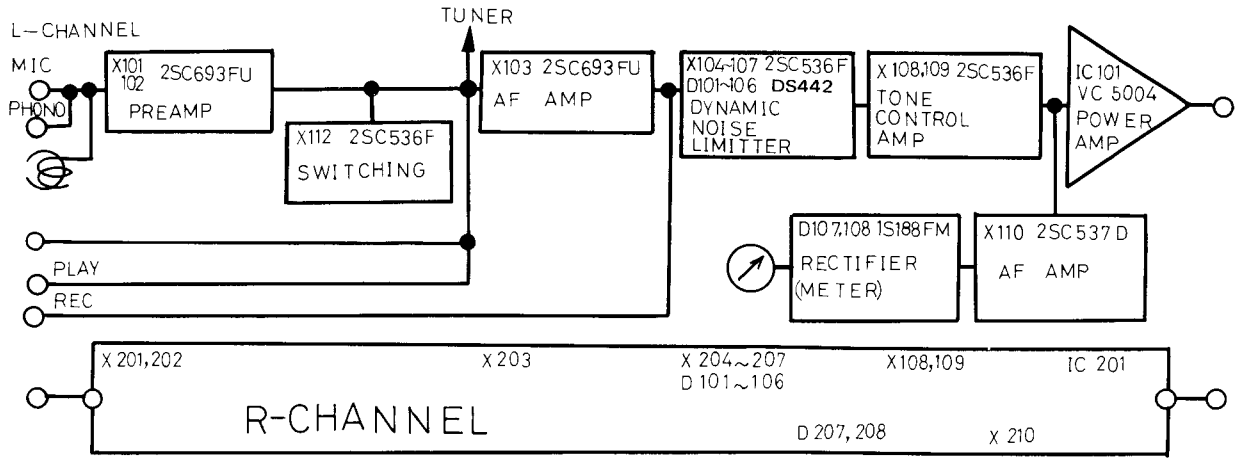


Fig. 38

RECORDING MODE

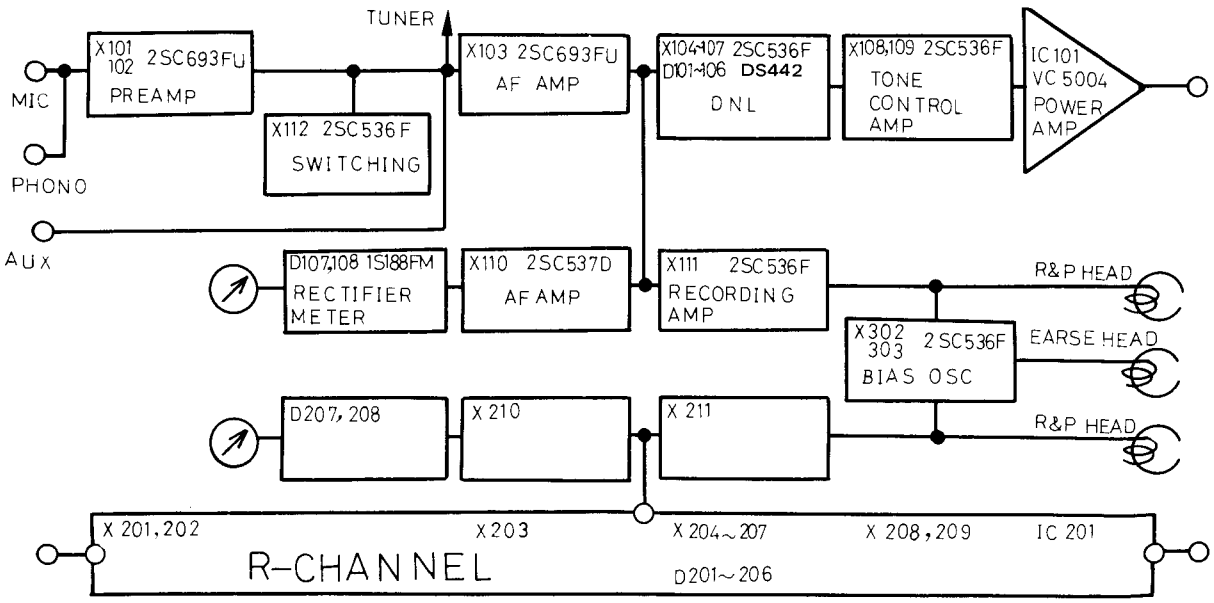
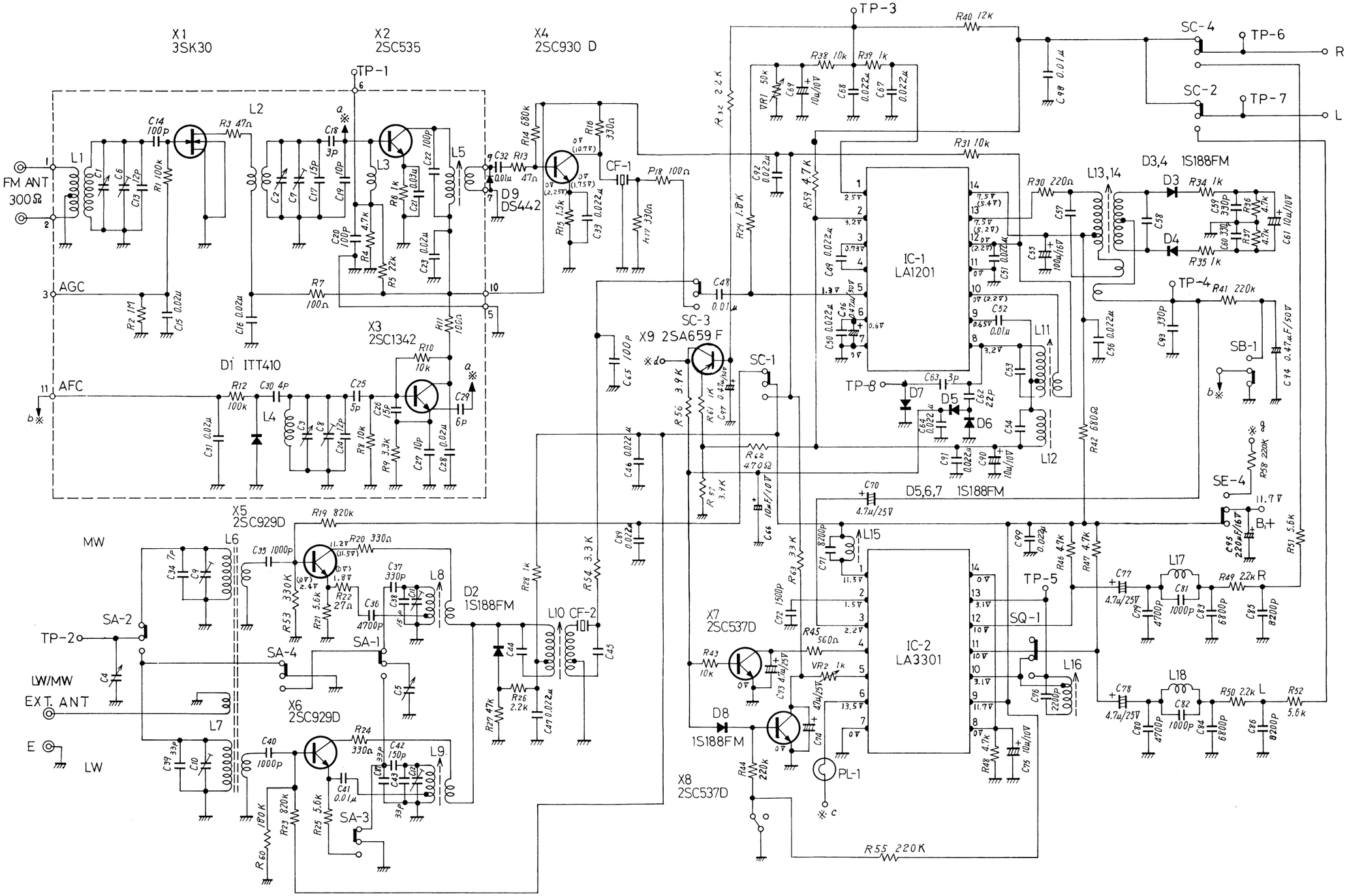
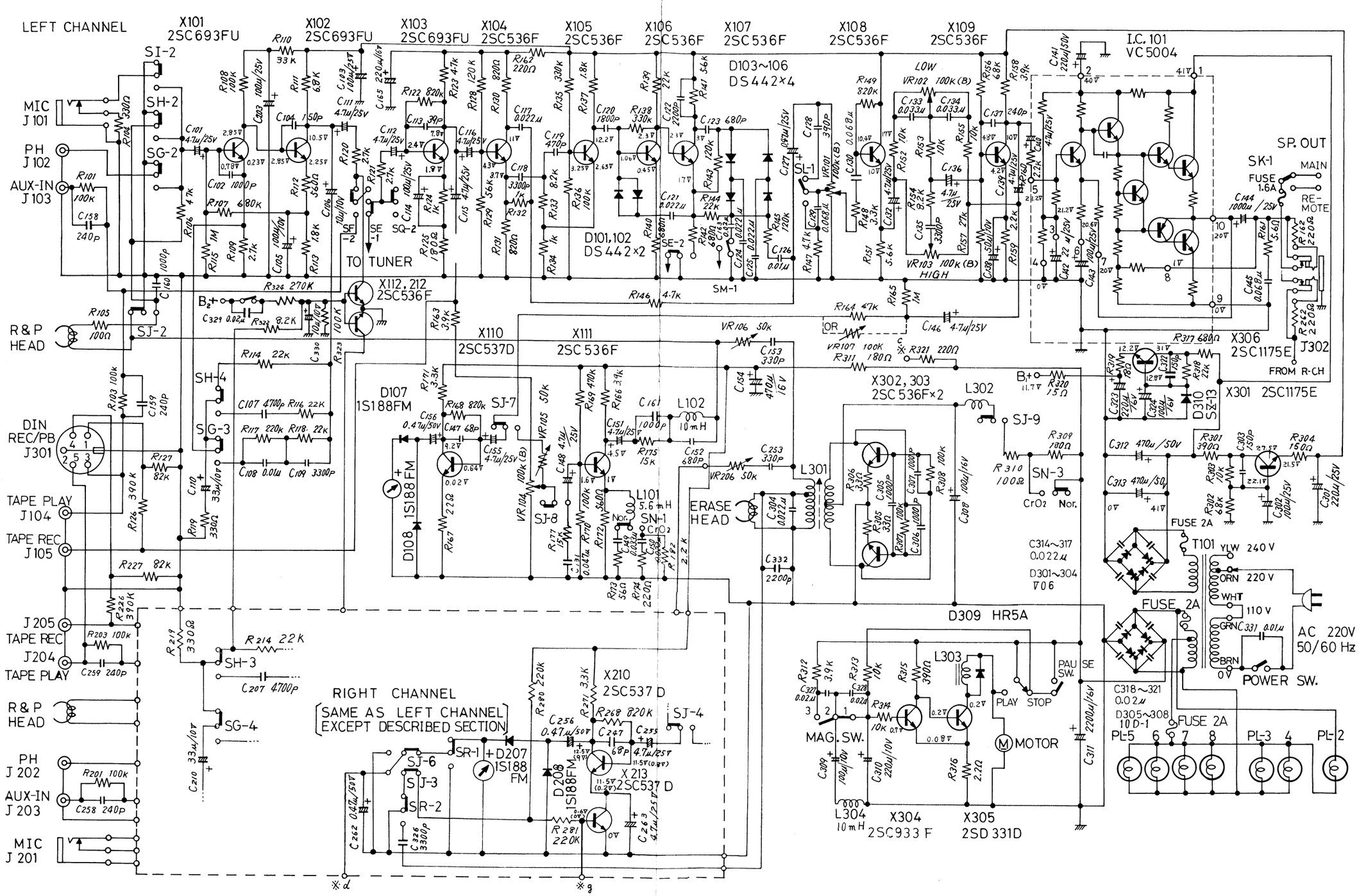


Fig. 39



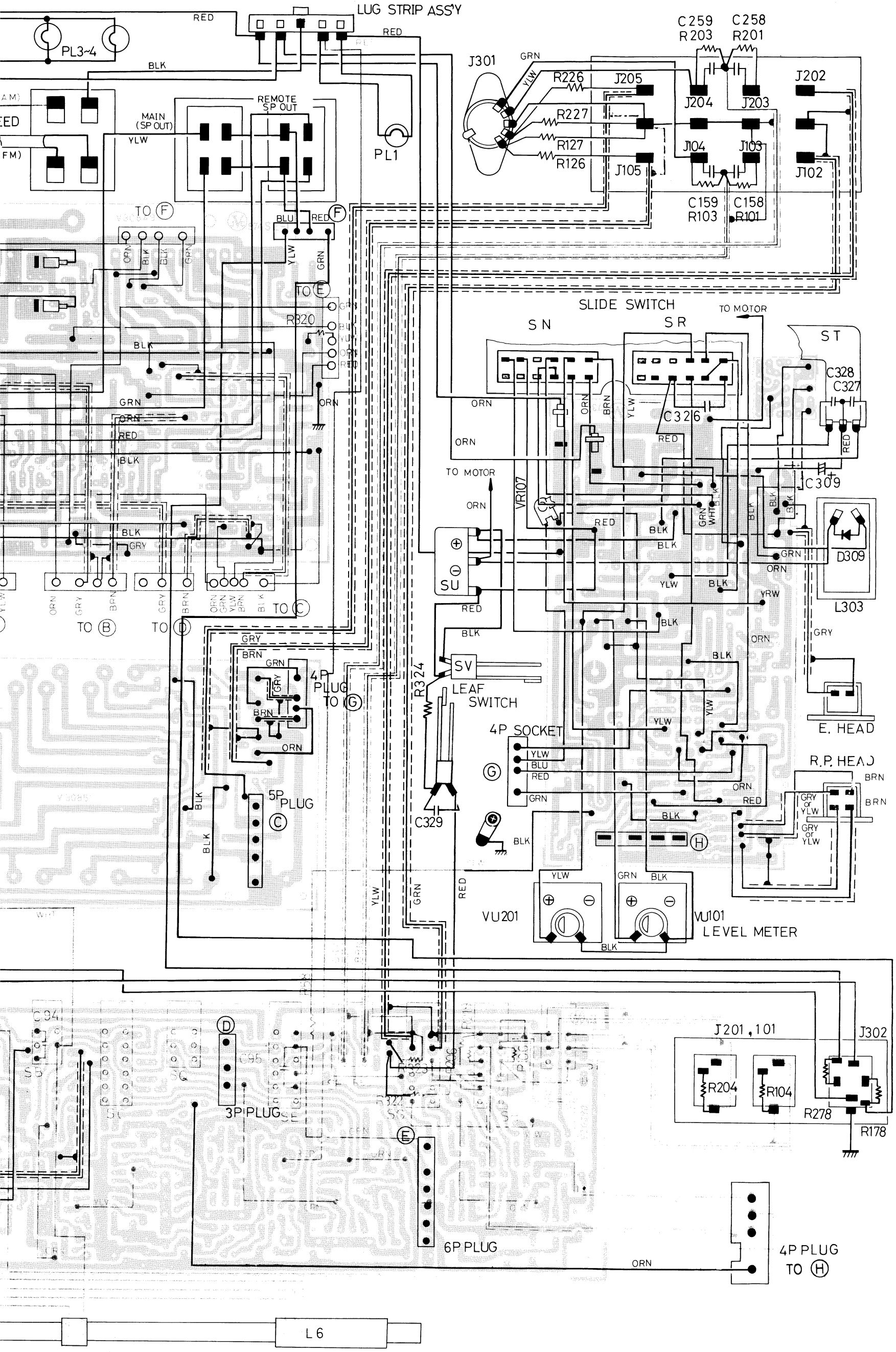
NOTE 1. SCHEMATIC DIAGRAM IS SHOWN WITH BAND SELECT SWITCH(SA,SB,SC) IN MW(SB) POSITION.
2. VOLTAGES ARE MEASURED WITH NO SIGNAL USING V.T.V.M. AT MW,LW. ( ) VALUES AT FM.

SCHEMATIC DIAGRAM OF 9470LS (TUNER)



NOTE 1. SCHEMATIC DIAGRAM IS SHOWN WITH FUNCTION SELECT SWITCH(SE,SF,SG,SH,SI) IN RADIO(SE) POSITION.
2. SWITCHES(SJ-1~SJ-9) ARE PLAY BACK POSITION.
3. VOLTAGES ARE MEASURED WITH NO SIGNAL USING V.T.V.M., ( ) VALUES AT RECORDING.

SCHEMATIC DIAGRAM OF 9470LS (AMPLIFIER)


LUG STRIP ASS'Y
RED
PL3-4
BLK
REMOTE SP OUT
MAIN (SP OUT)
YLW
PL1
J301
GRN
YLW
R226
R227
R127
R126
J205
J105
C259
R203
C258
R201
J204
J203
J202
J104
J103
J102
C159
R103
C158
R101
TO (F)
BLU
RED
YLW
GRN
TO (E)
R320
ORN
BLK
GRN
RED
TO (B)
TO (D)
TO (C)
SLIDE SWITCH
TO MOTOR
SN
SR
ST
C328
C327
C326
C309
VR107
GRN
WHT
D309
L303
E. HEAD
SU
SV
LEAF SWITCH
R324
C329
4P PLUG
TO (G)
5P PLUG
4P SOCKET
R.P. HEAD
GRY or YLW
VU201
VU101
LEVEL METER
J201,101
J302
R204
R104
R278
R178
3P PLUG
6P PLUG
4P PLUG
TO (H)
L6

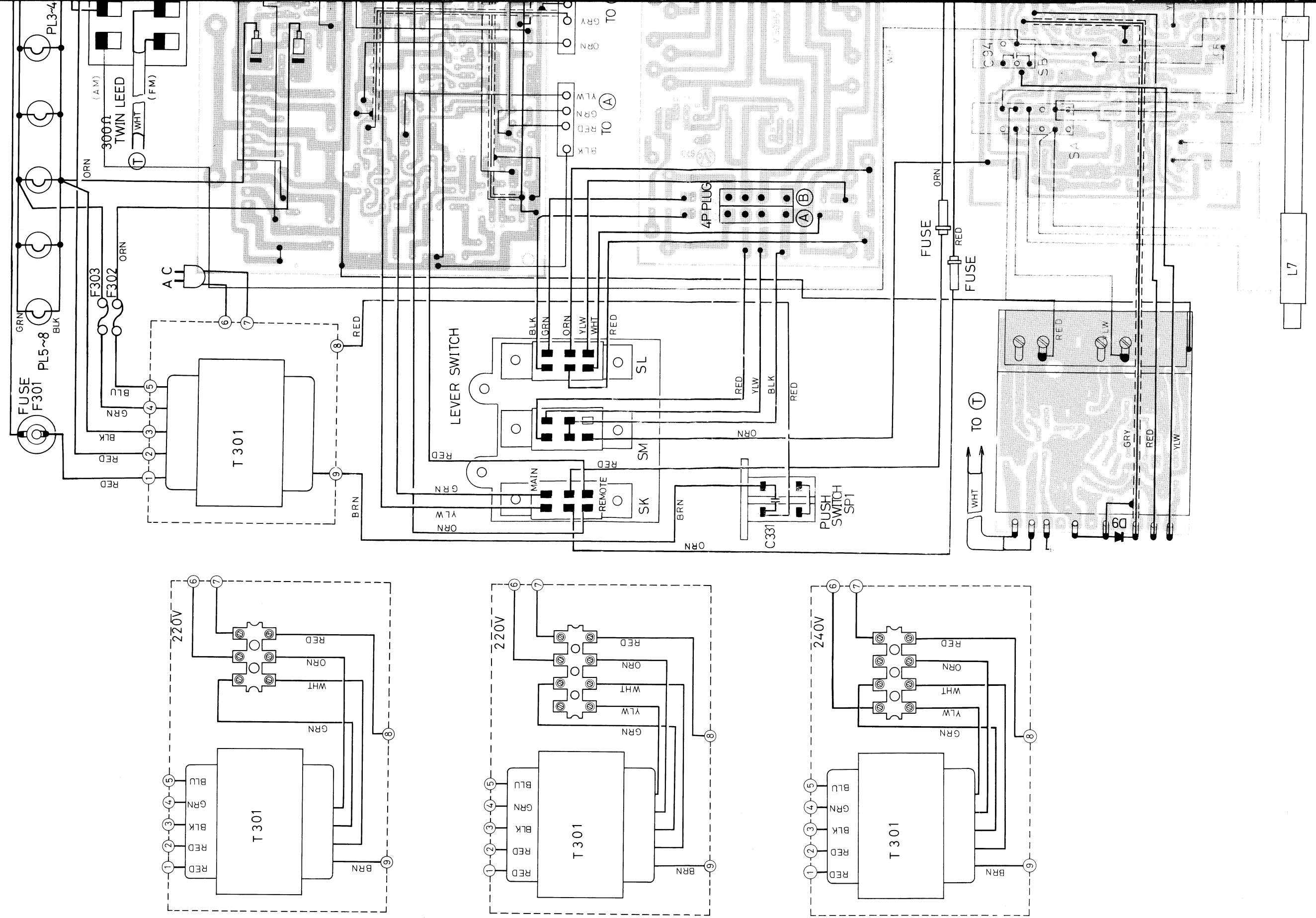

FUSE F301
PL5~8
PL3~4
GRN
BLK
ORN
F303
F302
AC
T 301
BLU
GRN
BLK
RED
BRN
LEVER SWITCH
SL
SM
SK
MAIN
REMOTE
BLK
GRN
ORN
YLW
WHT
RED
4P PLUG
A
B
FUSE
FUSE
300Ω TWIN LEED
(AM)
(FM)
WHT
T
TO A
TO T
GRY
YLW
C331
PUSH SWITCH SP1
S5
S4
C34
L7
D9
220V
240V

Fig. 40

PACKING ILLUSTRATION

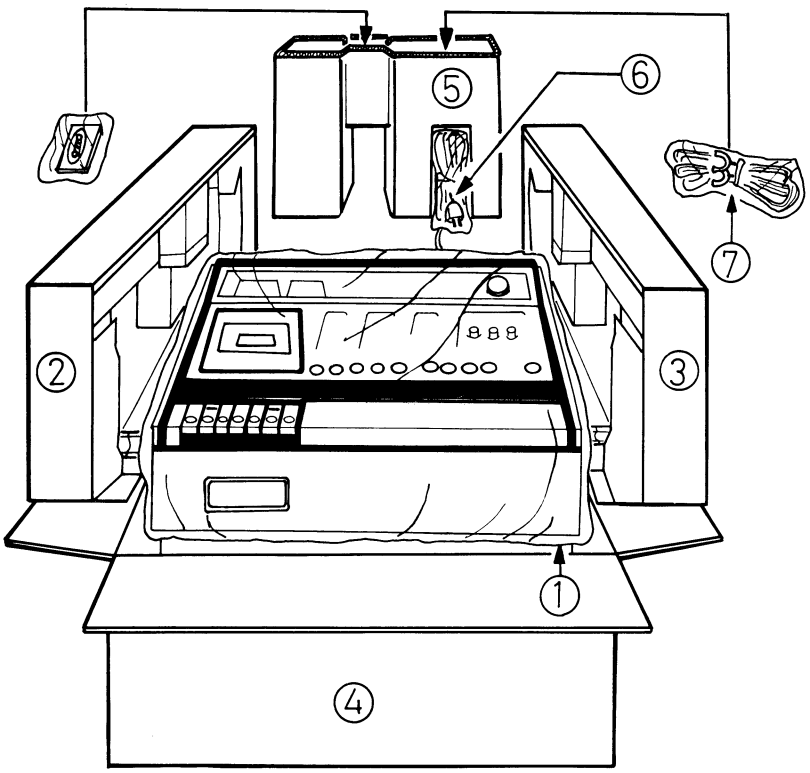


Fig. 41

Dwg. No.	Parts No.	Parts Name	Remarks
1	06026-53	Cabinet Cover	
2	VP2298-1	Cushion	Left
3	VP2299-1		Right
4	VP3269-1	Carton Box	
5	VP2300-1	Holder	
2~5	VP3269-00A	Carton Ass'y	
6	06023-16	Parts Sack	Power Cord
7	06023-12		FM Antenna

ACCESSORIES

Parts No.	Parts Name	Remarks
E3187-26	Built in Antenna	FM Antenna
V03098-18	Demonstration Cassette	

The Parts List for Replacement

Parts No.	Parts Name	Description
Coils & Transformer		
VNZ9001-402	Antenna Coil (FM)	L1
〃 -403	RF Coil (FM)	L2
〃 -405	IF Trap Coil (FM)	L3
〃 -404	Osc Coil (FM)	L4
〃 -406	I.F.T. (FM)	L5
VQB018B-011	Bar Antenna Ass'y	L6,7
V03083-7	Osc. Coil (MW)	L8
46923-42	〃 (LW)	L9
V03067-24	I.F.T. (AM)	L10,C44,45
V03046-35	〃 (FM)	L11,C53
V03029-35	〃	L12,C54
V03046-34	〃 (FM Det)	L13,14,C57,58
V03012-9	MPX Coil	L15,16
03226-18	Inductor	L17,18
03226-19	〃	L101,201
03226-17	〃	L102,103,202,203,302,304
V03083-9	Osc. Coil (Bias)	L301
V43728-1	Solenoid	L303
VTP76N5-A0A	Power Transformer	T301
Semiconductors		
LA1201	Integrated Circuit (Sanyo)	IC1
LA3301	〃 (〃)	IC2
VC5004	〃 (JVC)	IC101,201
3SK30	Field Effect Transistor (Hitachi)	X1
2SC535	Transistor (Hitachi)	X2
2SC1342	〃 (〃)	X3
2SC930(D)	〃 (Sanyo)	X4
2SC929(D)	〃 (〃)	X5,6
2SC537(D)	〃 (〃)	X7,8,110,210,213
2SA659(E)	〃 (〃)	X9
2SC693(FU)	〃 (〃)	X101,102,103,201,202,203
2SC536(F)	〃 (〃)	X104~109,111,112,204~209,211,212, 302,303
2SC1175(E)	〃 (〃)	X301,306
2SC933(F)	〃 (〃)	X304
2SD331(D)	〃 (〃)	X305
ITT410	Variable Capacitor Diode	D1
1S188FM	Germanium Diode (Sanyo)	D2~8,107,108,207,208
DS442	Silicon Diode (Sanyo)	D9,101~106,201~206
V06(C),(E)	〃 (Hitachi)	D301~304
10D1	〃 (I.R.C.)	D305~308
HR5A	〃 (Hitachi)	D309
SZ13	Zener Diode (Snayo)	D310
Capacitors		
VNZ9001-400	Variable Capacitor	C1~8
Q03638-1	Trimmer Capacitor	C9,10,11,12
Q03244-822	Mylar Capacitor	C85,86
Q03246-102	〃	C35,40,81,82,102,160,161,202,260,261, 305~307
〃 -222	〃	C122,222,332
〃 -332	〃	C109,118,135,209,218,235,326
〃 -472	〃	C36,79,80,107,207
〃 -682	〃	C83,84
〃 -103	〃	C32,41,48,52,98,108,126,208,226

Parts No.	Parts Name	Description
Q03246-223	Mylar Capacitor	C33,46,47,49~51,56,64,67,68,89,92,99, 117,121,124,125,150,217,221,224,225, 250,304,314~317
" -333	"	C129,133,134,149,229,233,234,249
" -473	"	C131,145,231,245
" -683	"	C130,230
Q03264-681	Polystyrol Capacitor	C123,152,223,252
" -152	"	C72
" -182	"	C120,220
" -222	"	C76
" -822	"	C71
Q03106-10	Electrolytic Capacitor	C61,66,69,75,90,106,206,330
" -30	"	C110,210
" -50	"	C105,138,205,238
" -200	"	C310
Q03107-5	"	C246
Q03108-100	"	C55,114,214,308,309,324
" -200	"	C95,165,265,323
" -500	"	C325
" -2000	"	C311
Q03110-5	"	C70,73,74,77,78,101,111,112,115,116, 132,136,139,140,146,148,151,155,201, 211,212,215,216,227,232,236,239,240, 248,251,255
" -30	"	C142,242
" -100	"	C103,143,203,243,302
" -200	"	C301
" -1000	"	C144,244
Q03112-0.5	"	C94,96,97,127,156,256,262
" -200	"	C141,241
" -500	"	C312,313
Q04191-103	Ceramic Capacitor	C331
Q00402-150CH	"	C42
Q04062-1000	"	C22
" -02	"	C15,16,21,23,28,163,263,318~321,327 328,329
*Q04335-	"	C20,24~27,29,30,37,59,60,65,93,128, 137,228,237
*Q04305-	"	Other Capacitors
Resistors		
Q04848-3	Variable Resistors	VR1,105,106,205,206
Q04843-4	"	VR2
QVT4AJB-515	"	VR101,201
QVT5AJB-115	"	VR102,103,202,203
QVT4AJB-015	"	VR104,204
Q04849-4	"	VR107
*04081-	Composition Resistor	R301,309,310,315,321
*04082-	"	R178,278,304,316,317
*Q04805-	Carbon Resistor	R102,106~120,202,206~220
*Q04802-	"	R1~18,20,29,31,34~40,42,43,45~50, 52~54,56,57,59,60,64,101,103,105,121, 122,126,127,147,153,164,168,172~177, 182,201,203,205,221,222,226,227,247,248, 253,261,264,268,273~277,280~283,302, 303,305~308,318,319,323
*Q04800-	"	Other Resistors

Note : When you require capacitors or resistors marked *, write capacitance or resistance value in addition to the right hand of hyphen.

Parts No.	Parts Name	Description
Others		
QSP0244-001	Push Switch	SA,SB,SC,SQ
QSP0254-001	"	SE,SF,SG,SH,SI
QSS0025-002	Slide Switch	SJ
QSL2235-003	Lever Switch	SK,SL,SM
QSS0034-001	Slide Switch	SN,SR
VSU2130-00A	Push Switch Ass'y	SP
V43939-1	Leaf Switch	
QLP3104-202	Pilot Lamp	PL1 STEREO Indicator
QLP3104-201	"	PL2 Needle Illumination
Q04968-001	"	PL3~8
Q30110-A	Pilot Lamp Socket	
QMF51A2-1R6	Fuse	F101,201 1.6AT
QMF51A2-2R0	"	F301,302,303 2AT
QMG0301-002	Fuse Holder	for F301
Q30213-001	"	for F302,303
QMG8301-002	"	F101,201
QMS6303-003	Mic Jack	J101,201
E0778-80	8P Jack Ass'y	J102~105,202~205
Q03967-1	DIN Socket Ass'y	J301
QMS6301-008	Headphone Jack	J302
E03410-001	4P Push Terminal Ass'y	
Q30150-002	Terminal Board Ass'y (2P)	FM & AM ANT
QMC0329-001	Plug Ass'y (3P)	
QMC0429-001	" (4P)	
QMC0529-001	" (5P)	
QMC0629-001	" (6P)	
A44623-00A	" (4P)	
V04059-001	" (4P)	
QMC0359-001	Socket Ass'y (3P)	
QMC0459-001	" (4P)	
QMC0559-001	" (5P)	
V04060-00A	"	
" -00B	"	
V03089-3	Level Meter	VU101,102
V03059-7	Ceramic Filter	CF1
VAF2A23-32A	Tuner Ass'y	FM RF stage with variable capacitor
VDL5010-001B	Cassette Mecha Ass'y	
QMP3800-244	Power Cord with Plug	SEV type approved
QMP9014-001	"	SEMKO type approved
QMP7800-244	"	Continental type plug
V40976-3	Power Cord Bushing	

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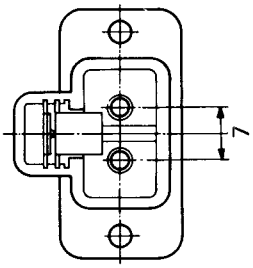
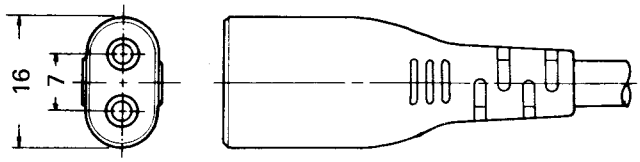
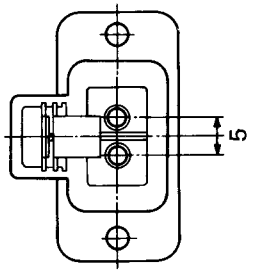
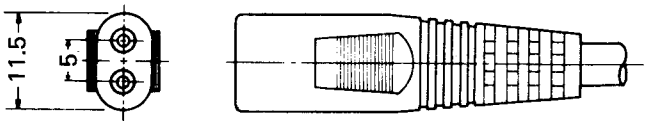
JVC

No. 1267-B

Supplementary
SERVICE MANUAL
for
MODEL 9407LS

The following parts have been changed in the midway of production.
Please correct the items concerned in the SERVICE MANUAL (No. 1267)

1. Two types of AC sockets have been adopted to comply with the standard for safety of the destination. This alteration has affected the power cord.

Destination	AC Socket	Power Cord
England	QMC0262-002 	QMP9017-003 
Other Countries	QMC0261-101 	QMP7820-183 QMP3810-183 

2. The output transformer has been changed after serial No. 04610001.
   It is interchangeable.
3. The amplifier circuit has been improved after serial No. 04610001.
4. Some component parts have been changed to improve the performance.

PARTS ARRANGEMENT ON PRINTED CIRCUIT BOARD (TUNER)

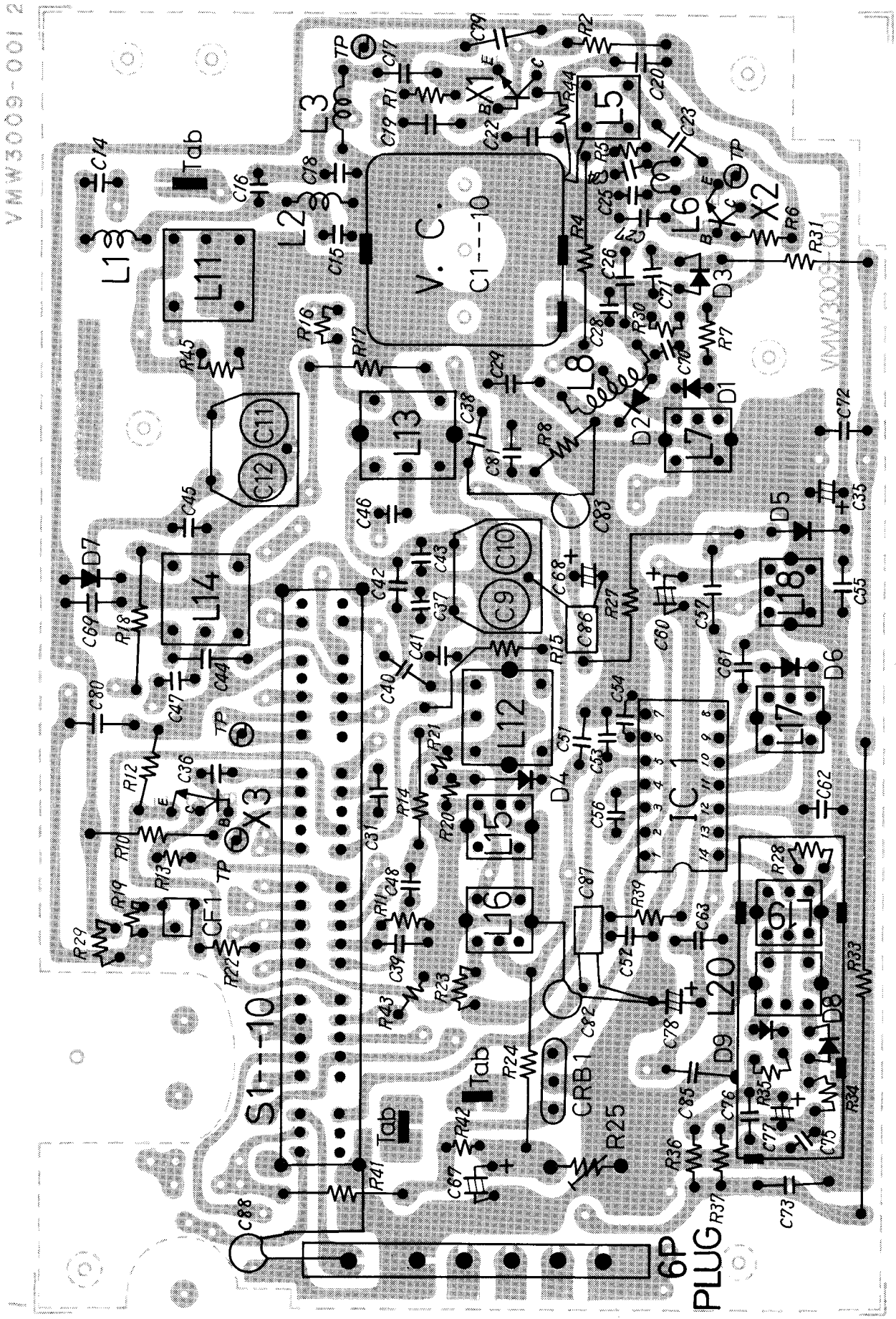


Fig. 11

PARTS ARRANGEMENT ON PRINTED CIRCUIT BOARD (AMP & BAIS OSC)

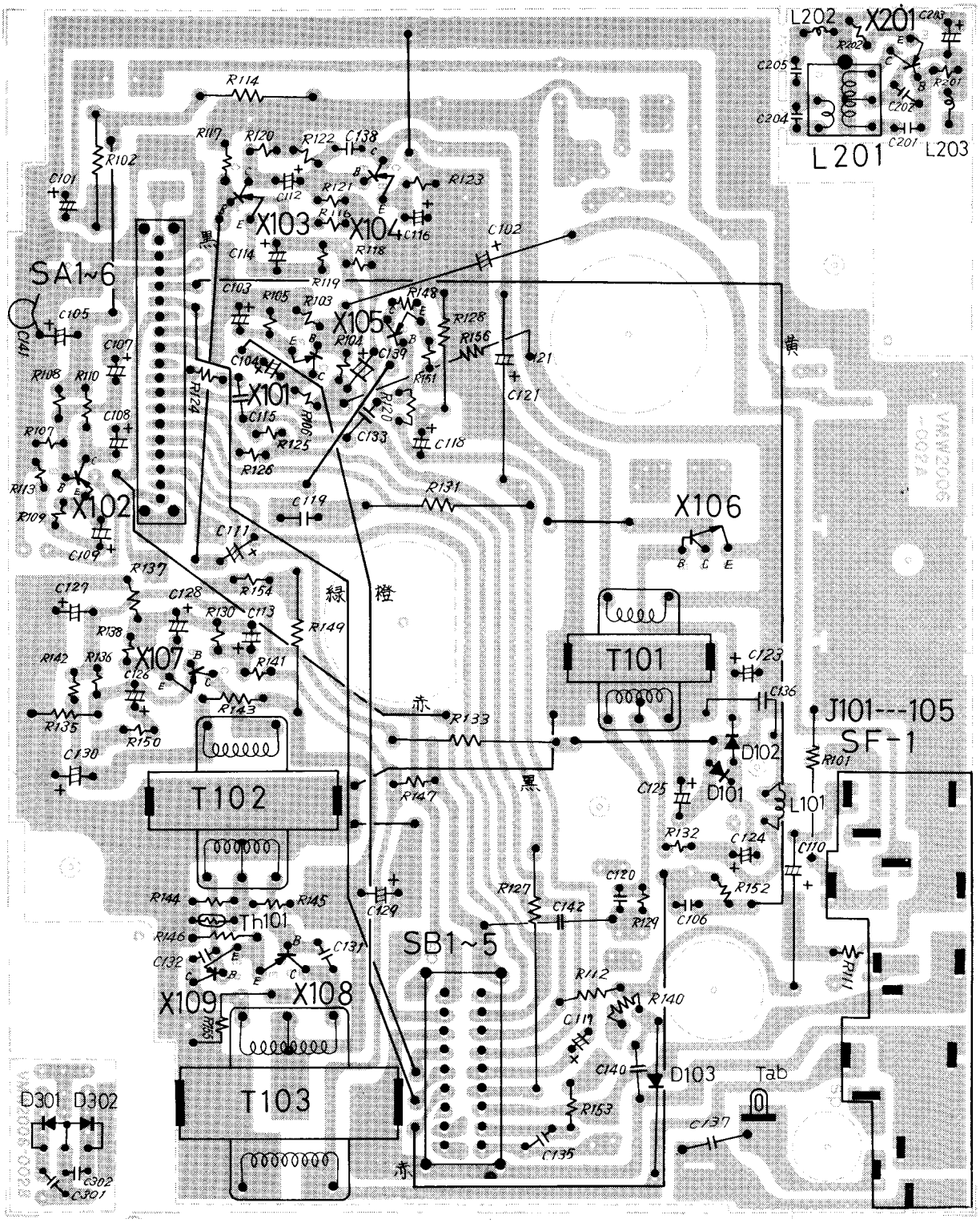


Fig. 12

SWITCH ASS'Y

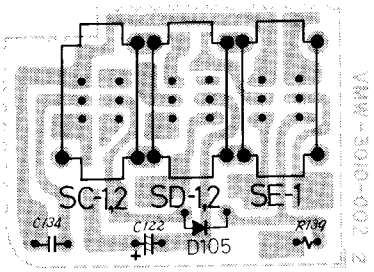


Fig. 13

PARTS LIST OF CASSETTE MECHANISM (Refer to Fig. 24)

Dwg. No.	Parts No.	Parts Name	Remarks
1	V30900-00A	Nech. Chassis Ass'y	
2	V44017-00A	Lever Switch Ass'y	
3	V30889-00A	Push Button Ass'y	
4	V30889-00B	"	RECORD
5	V30889-00C	"	STOP
6	V44046-001	Button Frame (B)	
7	SPSP2604Z	Screw	
8	V44109-00A	Head Panel Ass'y	
9	V42727-A	Pinch Roller Arm Ass'y	
10	V43034-2	Pinch Roller Spring	
11	REE1900	"E" Washer	
12	V03078-15	R/P Head	
13	V42675-1	Spring	
14	SPSP2603Z	Screw	
15	V03078-7	E. Head	
16	V42603-1	Wire Clamp	
17	SPSP2005Z	Screw	
18	V44044-001	Eject Plate	
19	V43044-1	Collar	
20	V44081-001	MCS Collar	
21	SDSP2610Z	Screw	
22	SDSP2606Z	"	
23	V44025-00A	Auto Stop Lever Ass'y	
24	V43412-1	Collar	
25	WNS2600Z	Washer	
26	V44083-001	Spring Stopper	
27	180502T	Spring	Parts No. changed Interchangeable
28	WLS2600	Lock Washer	
29	NTB2600	Nut	
30	V43229-A	Stop Detect Lever Ass'y	
31	V43042-001	Stop Detect Contact	
32	V43230-2	Collar	
33	WLS2000	Lock Washer	
34	V43410-1	Tape Guide	
35	150802T	Spring	Parts No. changed Interchangeable
36	3951081ZT	FF Idler Arm Ass'y	Changed Note : 1
37	3900802T	FF Idler	Parts No. changed Interchangeable
38	REE1200	"E" Washer	
39	V44211-00A	Takeup Roller	Parts No. changed Interchangeable
40	V44136-001	Spring	Parts No. changed Interchangeable
41	V44088-001	Main Plate	
42	————	Vinyl Tube	5.5φ×0.5t×33
43	T191072T-001	Spring	
44	V44120-00A	Rewind Arm Ass'y	
45	V44091-001	Special Washer	
46	REE4000	"E" Washer	
47	V43158-00C	Takeup Arm Ass'y	
48	REE2300	"E" Washer	
49	V43884-001	Spring	
50	V43064-A	Flywheel Bushing	
51	SBSB2604Z	Screw	
52	SPSP2608Z	Screw	
53	V43065-B	Flywheel Ass'y	
54	V41750-1	Special Washer	
55	V41750-2	"	
56	V44029-00C	Flywheel Bracket Ass'y	Parts No. changed Note : 2

DISASSEMBLY DIAGRAM OF CASSETTE MECHANISM

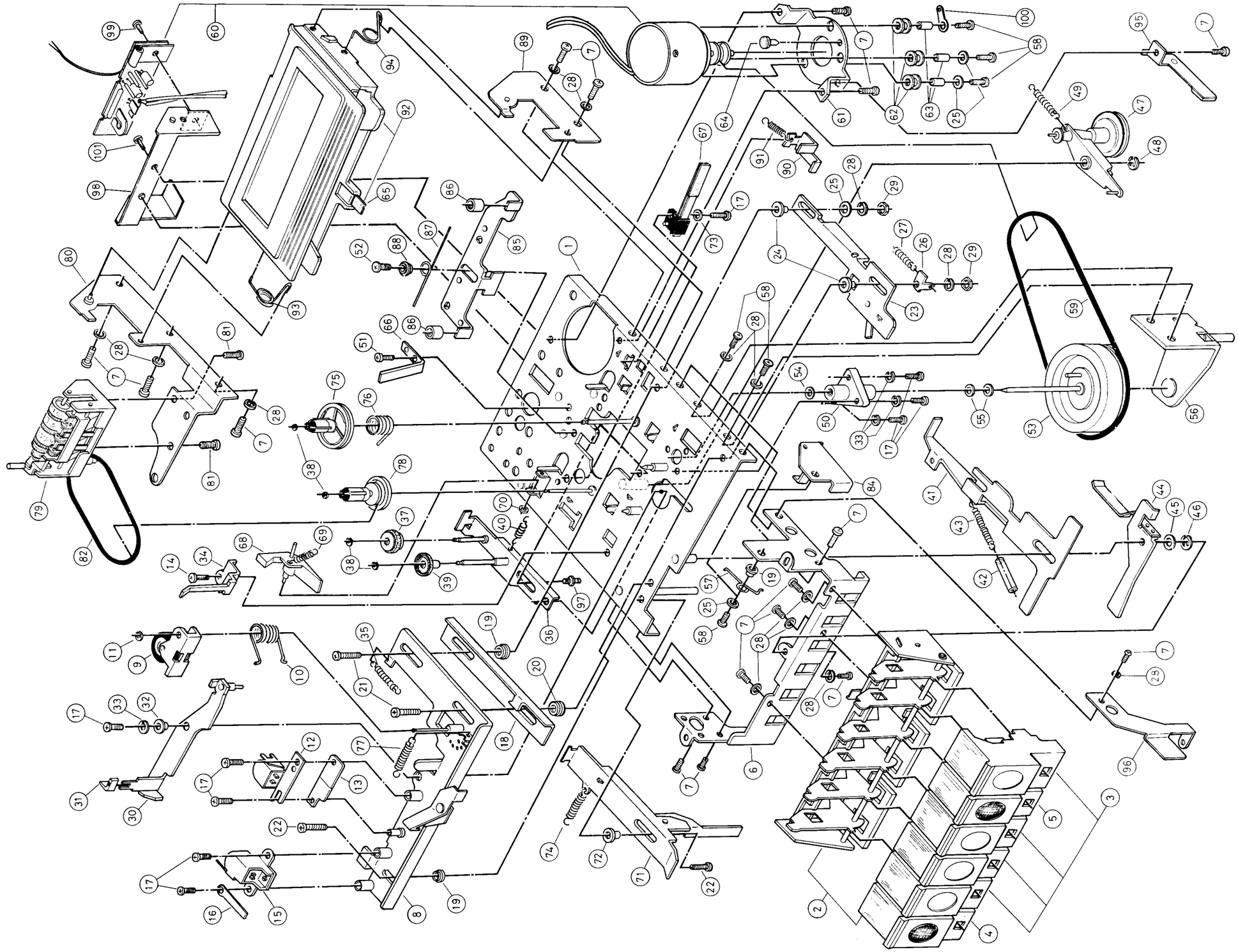
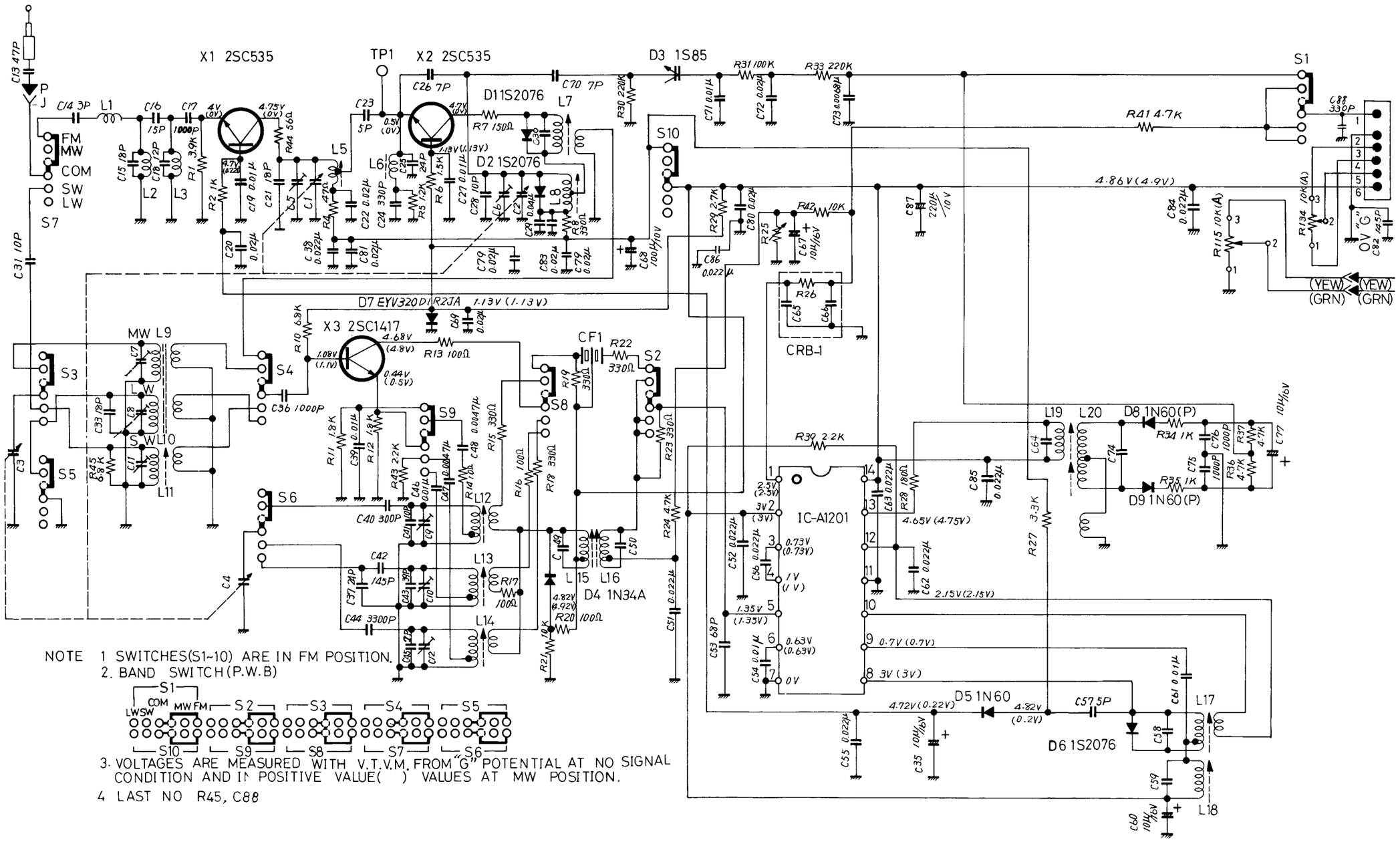
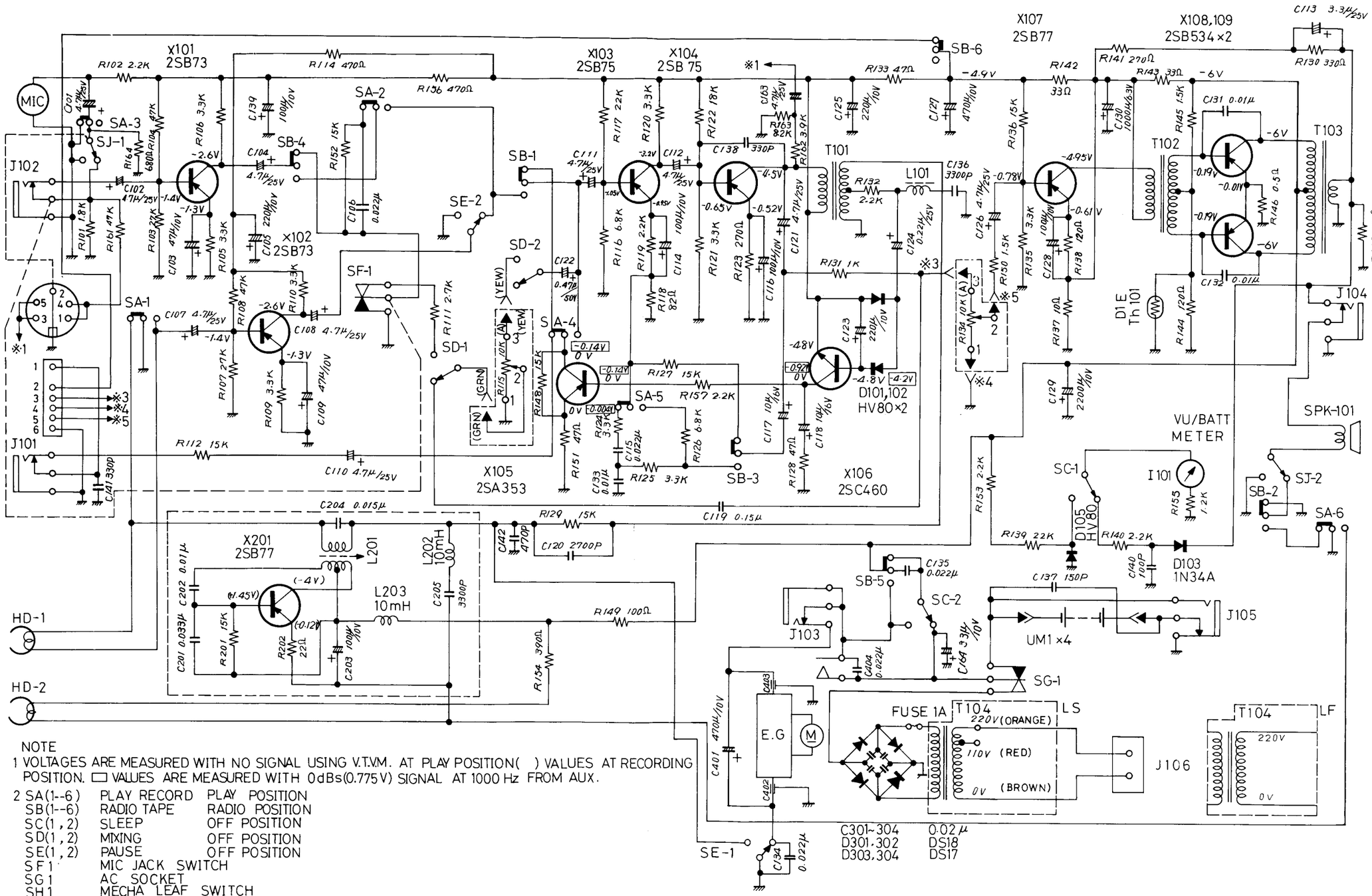


Fig. 24

SCHEMATIC DIAGRAM OF 9407LS (TUNER)



SCHEMATIC DIAGRAM OF 9407LS (AMPLIFIER)



NOTE

1 VOLTAGES ARE MEASURED WITH NO SIGNAL USING V.T.V.M. AT PLAY POSITION( ) VALUES AT RECORDING POSITION. □ VALUES ARE MEASURED WITH 0dBs(0.775V) SIGNAL AT 1000 Hz FROM AUX.

2 SA(1--6) PLAY RECORD PLAY POSITION
SB(1--6) RADIO TAPE RADIO POSITION
SC(1,2) SLEEP OFF POSITION
SD(1,2) MIXING OFF POSITION
SE(1,2) PAUSE OFF POSITION
SF1 MIC JACK SWITCH
SG1 AC SOCKET
SH1 MECHA LEAF SWITCH
SJ(1,2) DIN SOCKET SWITCH OFF POSITION

3 LAST NO. C164 R164

PARTS LIST OF CASSETTE MECHANISM (Refer to Fig. 24)

Dwg. No.	Parts No.	Parts Name	Remarks	
57	V44043-001	Spring		
58	SPSP2606Z	Screw		
59	T46257-001	Main Belt	Parts No. changed	Interchangeable
60	BF602R-05	Motor		
61	V44032-001	Motor Bracket		
62	V43049-1	Motor Rubber		
63	V43270-1	Collar	misprinted	
64	V43463-1	Spacer		
65	03084-476	Felt	misprinted	
66	V43101-2	Pack Spring		
67	V44212-001	Leaf Switch	Parts No. changed	Note : 3
68	V43941-001	Record Safety Lever		
69	V43968-001	Spring		
70	RDS1900S	"CS" Washer		
71	V44018-00A	Record Plate Ass'y		
72	V43863-001	Collar		
73	WNS2000Z	Washer		
74	V44101-001	Spring		
75	V44037-00A	Reel Disk Ass'y		
76	V41679-11	Spring		
77	V44111-001	"		
78	V44038-00A	Supply Reel Ass'y		
79	V30712-1	Tape Counter		
80	V44052-00B	Counter Bracket Ass'y	Parts No. changed	Note : 4
81	SPSP3006ZS	Screw		
82	V44121-001	Counter Belt		
83	Blank No.		Deleted	Note : 4
84	V44050-001	Eject Lever		
85	V44204-001	Brake Arm	Parts No. changed	Note : 5
86	V43476-1	Brake Shoe		
87	V44217-001	Brake Arm Spring	Parts No. changed	Note : 5
88	V44216-001	Brake Arm Metal	Parts No. changed	Note : 5
89	V44074-00A	Case Bracket Ass'y		
90	V43840-001	Stopper		
91	V44136-001	Spring		
92	V30890-00A	Cassette Case Ass'y		
93	V44077-001	Spring (R)		
94	V44076-001	Spring (L)		
95	391291T	Mat Arm Ass'y	Added	
96	2680806T	Amp Bracket	Added	Note : 2
97	3951005T	FF Idler Arm Metal	Added	Note : 1
98	V44138-001	Bracket	Dwg. No. changed	
99	SBSB3005Z	Screw	Dwg. No. changed	
100	V44180-001	Terminal Lug	Dwg. No. changed	
101	SPSP3004Z	Screw	Dwg. No. changed	

Note :

1. Dwg. No. 36 should be changed together with No. 97.
2. Dwg. No. 56 should be changed together with No. 96.
3. Dwg. No. 67 is not interchangeable and it differs in size and mounting position.
4. Dwg. Nos. 80 & 83 should be changed simultaneously.
5. Dwg. Nos. 85, 87 & 88 should be changed at the same time.

PARTS LIST OF CABINET . . . . . P. 9

Dwg. No.	Parts No.	Parts Name	Remarks
20	SWSP3006ZS	Screw	Changed after serial No. 02610001 Interchangeable
39	QMC0262-002	AC Socket Ass'y	for England
39	QMC0261-101	"	Other Countries
48	V30888-00B	Toggle Lever Ass'y	Changed after serial No. 12580001 Interchangeable

MAIN PARTS LOCATION . . . . . P. 11

Dwg. No.	Parts No.	Parts Name	Remarks
13	QMC0262-002	AC Socket Ass'y	for England
13	QMC0261-101	"	Other Countries

PARTS LIST OF TUNER CHASSIS . . . . . P. 12

Dwg. No.	Parts No.	Parts Name	Remarks
9	V30888-00B	Toggle Lever Ass'y	Changed after serial No. 12580001 Interchangeable

PARTS LIST OF AMP. CHASSIS . . . . . P. 13

Dwg. No.	Parts No.	Parts Name	Remarks
7	V30906-001	Switch Holder	misprinted
14	V43957-002	Radiation Plate	Changed after serial No. 12580001
16	V43343-2	"	"

Note : Dwg. Nos. 14 & 16 should be changed simultaneously.

ACCESSORIES . . . . . P. 17

Parts No.	Parts Name	Remarks
QMP9017-003	Power Cord	for England (without Plug)
QMP7820-183	Power Cord with Plug	Continental type plug (Changed)
QMP3810-183	"	SEV type approved (Changed)

The Parts List for Replecement

T103	(Output Transformer)	V03075-10 → VTS28E0-33A	Interchangeable
C128	(Electrolytic Capacitor)	QEW41AA-107 → QEW41AA-477D11	
C143	(Electrolytic Capacitor)	QEW41CA-106	Added
C162	(Ceramic Capacitor)	QCY41HK-222	Deleted

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